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OLD WINE IN NEW BOTTLES*

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I WAS pleased to receive an invitation to address this Society; but at the same time I was doubtful as to my ability to present anything on the subject of "old books" that would be useful or interesting to this group of book experts.

I wish to disclaim at the outset any intention to give the impression that the discussions and statements in this paper represent the results of systematic research or profound scholarship. On the other hand, my interest in old books and their contents has been more stimulating intellectually and much more absorbing than playing bridge.

The title was suggested by the occurrence, in the course of more or less desultory reading over a wide field, of a series of instances which indicated that a great many ideas, practices, or devices that are commonly regarded as modern formulations or discoveries really were well known and established in the cultures of long-forgotten ages. Examples of these re-discoveries run the gamut of architecture, education, medicine, sanitation, and symbols.

One cannot avoid being impressed by the persistence and indestructibility of ideas—and a feeling of amazement that centuries after they were lost, forgotten or disregarded by reason of war or pestilence, they should be so very modern when they are re-discovered; e.g., only a few weeks ago some features of the design made by Frank Lloyd Wright of an office building in Wisconsin gave rise to comment. Among other points, a new form of supporting pillar—broad at the upper weight-bearing end and gradually tapered to a much smaller diameter at its foot—roughly suggesting a wooden golf tee. The stability and

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weight-bearing characters had been carefully checked by mathematical calculation and by physical tests. It had, among other advantages, that of economy in floor space and less interference with light. Correspondence with the editors of the publication that contained pictures of this "new" form of pillar brought out the fact that such pillars had been found in place in the palace of Knossus in Crete—built 4000 or so years ago. The editorial comment on this information was to the effect that: "The Minoans must have been quite progressive for their time." There is an air of smugness and callowness about this comment that is both amusing and a little irritating. This impression is not lessened by the fact that in this same place was found practically intact a series of aquaducts for water supply, channels or sewers for drainage, and—most "modern" of all—a fully equipped sanitary bathroom and water closet that required only a restoration of water supply to fit it for use by the archeologists.

Since our example has lead to the subject of archeological sanitation, it may not be amiss to note in passing that the next appearance in history of this convenience was in the time of Queen Elizabeth, when Sir John Harington—an ingenious and witty member of the court—wrote a book which he called *Ajax,* in which he gave an account of his "invention" of a water closet—illustrated with working drawings and described in terms so enthusiastically indelicate that the Virgin Queen banished him from the country for some months. He is the same Harington who wrote the scholarly treatise—the *Englishman's Doctor or the School at Salerno.*

It is interesting to note evidences of the relationship between the Minoan culture which dates back to sometime in the fourth millennium B.C. and that of the Greeks, who at times conquered the Minoans and at other times were conquered by and were subservient to them. The legend of the "Tribute of Greek Maidens to the Minotaur" is an example of the latter relationship. Greek writings represent the Minotaur—the Minoan Bull—as a sort of devouring monster to which the maidens were sacrificed. There is reason to think, however, that these Greek maidens were selected and trained for religious services in the Minoan ritual that were analagous to those of the vestal virgins in Roman times. There are many other examples of the close cultural relationship between the old Cretan civilization and the younger Greeks, of which only two will be mentioned: The "caduceus" which comes to us with unchanged significance from the priest-doctors of Crete; and athletic contests with religious significance which existed in Crete and in Mycenae hundreds of years before there is any record of similar "funeral" games in Greece which developed into the "Olympic Games"—both ancient and modern.

Whatever the original inspiration, we must give the Greeks credit

for an amazing development of the medical practices and attitudes that were dominant in the civilized world down to about the third century of the Christian Era—then were lost and after 1500 years or more have come back again and are being surpassed as a result of modern discoveries.

Let us consider a few examples from the history of Greek medicine in support of this statement:

(1) Mentally abnormal persons were regarded as deserving of care and pity—rather than of ostracism and abuse. They were treated in the Sanitaria by hypnotism, music, various forms of occupation, and their dreams were interpreted by the priest-doctors—thus anticipating Dr. Freud.

(2) Surgery at Cos: "They prescribed clean or boiled water in which wounds were washed, and directed that dressings be of new linen. . . . They expected clean wounds to heal promptly. They insisted that the surgeon's nails should be short and the hands clean."

(3) One of my friends—a professor of Greek—tells me that a native scholar in Greece and a profound student of the old literature reported that one of the fragments of Hippocrates read as follows: "It has been noted that persons suffering from serious blood conditions profit greatly by a diet of raw liver." This American professor suffered from pernicious anaemia and was under treatment with liver extract—so he appreciated this bit from the old Greek medicine.

(4) Hippocrates observed a type of breathing in patients about to die which he described as: "Breathing throughout—as though he were recollecting to do it." Centuries later, two Irish doctors described this same type of breathing: "The respirations increase, decrease, cease, and repeat the cycle." We call it "Cheyne-Stokes" after these two men who described the symptom.

While we are on the topic of medicine, let us note in passing that Galen was probably the first athletic team doctor in history. "He was placed in charge of the gladiators by the Pontifex of the Games in Pergamos. Here he devised a successful dressing for the treatment of ruptured tendons, so that the full function of the injured limb was regained. Then he began to suture ruptured tendons with good results." His reputation spread and the Emperor Marcus Aurelius put him in charge of the young Prince Commodus. So far as we know, this "surgical gene" of Galen was recessant for hundreds of years—only to become dominant again in the persons of Dr. George Bennett and other wizards of joint surgery.

The first appointment in modern times of a doctor who was given full responsibility for the physical welfare of students in athletics was made by McGill University in 1896. The man appointed was the noted physician, sculptor and athlete—the late R. Tait McKenzie. This was the first instance in a university of such an office and responsibility on this continent and probably in the world. The second appointment—and the

first in the United States—was made by the University of Chicago in 1899. To avoid misunderstanding, it should be stated that there were instances of the employment of medical men by managers or captains of athletic teams in two or three universities about the same time as the appointment of McKenzie. The difference in the two positions was fundamental. In the latter situation the captain, the coach, or more likely the "trainer" could, and did, disregard the doctor's judgment as to what was best for the student—while in the former the doctor had the backing of the University to support, and, if necessary, to enforce his decisions.

Now-a-days, no self-respecting educational institution puts a personal contact team in the field without a team doctor—who in theory at least and sometimes actually has the power to overrule the trainer and the coach in decisions affecting the welfare of the athlete. There is at least one university in England that has such an official. Germany in recent years had her "sports doctors"; and the other day I was sent a book in French—*Lesions et traumatismes sportifs.*

Every culture of which we have any considerable knowledge has been characterized by a concern for the education of its youth. Objectives, methods and philosophies have differed—but always this concern has been a prominent factor along with the arts of peace and war, measures for preserving health and avoidance of disease, and religious observances.

Incidentally, there is too little appreciation of the invaluable services of the Arab culture in collecting and transmitting the knowledge recorded in the writings of India, old Egypt, and Greece. This Arab literature is a valuable source of investigation for the scientist, mathematician, and physician. These records brought the concept of zero to the West; contained reference in the 12th century to the transmissibility of plague by contact or by flies, and advised as a protective measure the burning of bodies, clothes, and houses of those who died from this disease; and described the pulmonary circulation 300 years before the time of Servetus.

A word about zero. It is said to have been known to the Arabs about 600 A.D. and to have appeared in France about the 12th century—but recently it was stated, on what appears to be good authority, that the Mayans, whose astronomical knowledge and records still rouse wonder, had concept of zero before the Christian Era and were accustomed to use the decimal point in their calculations.

The general characteristics of the educational system of training for citizenship in the Classic Age when moral, mental and physical training proceeded side-by-side—as described by Solon to the Scythian are too well known—in principle at least—to call for any discussion in a paper as brief as this should be. In due time, this system came to an end; and

for a thousand years or so during the Dark Ages there were few features of these educational systems that were worthy of attention.

When we come to the Elizabethan Age, however, we see great changes taking place: There were two really great schoolmasters in the 16th century. One was Corderius, who exerted the greatest influence over his pupil Calvin. He insisted upon the study of French and Latin separately—thus departing from the common practice, which was to teach through the medium of the corrupt French and Latin mixture which was in common use. The result was that Calvin's prose in either French or Latin won praise from the great literary critic Saintsbury, who certainly expresses no admiration for Calvin as a person.

But the outstanding man in this period—and perhaps for the intervening time—as regards his objectives and his methods of teaching—is Richard Mulcaster, first head of the Merchant Taylor's School in London in Elizabeth's time—a position which he held for twenty-five years. He was a scholar in Hebrew, Greek, and Latin; but he insisted that English should be learned before Latin for the reason that one can "Learn better to read first that which he speaks first." And also, since his pupils were from a class that would pass on to them heavy responsibilities in government and the professions, they should be masters of the English language, which he described in the following terms: "Our tongue will strain with the strongest and stretch to the furthest for either government if we are conquerors, or for cunning if we are treasurers, not one whit behind either the subtle Greek for crouching close, or the stately Latin for spreading fair."

This was the teacher of Edmund Spenser; and his foresight lead him to insist that "Education is the birthright of every child—girls as well as boys—born into the community; that the day school is the normal arrangement; and that private tutoring can only be justified by special circumstances—that the pupils would better live at home if 'the parents take seriously the obligations for manners and behavior. The parent and the teacher have different offices.' The difficulties of upbringing are too serious to be thrown into the hands of one alone." He recognized individual differences in his pupils: "Surely, to beat for not learning a child who is willing to learn but whose intelligence is defective is worse than madness. Beating must be only for ill-behavior, not for failure in learning." He was convinced that the end of all physical and intellectual training is the development of feelings that prompt right conduct—not book-learning for its own sake. The teacher should have regard for the unfolding of the whole character that will bear fruit in the discharge of the duties of citizenship and other activities of a complete life.

He laid great emphasis upon games, music and dramatics. His boys

presented pageants before Queen Elizabeth so that they were taught good manners and self-confidence. He emphasized the training and participation in a wide range of competitive sports under the direction of the masters, who had to be athletes as well as scholars; and he had a keen insight into the limitations of the growing boy, as shown by his advice in training boys for sports which is worthy of emphasis today: "Hasty pressing onward is the most dangerous enemy that anything can have whose best it is to ripen at leisure." Possibly this policy on his part had its basis in the statement of Aristotle to the effect that: "Those who performed successfully in the boys' contests seldom did well as adults in the Olympic Games."

Today, we say that education should deal with the total personality; but in practice intellectual training tends to be emphasized, and the physical and emotional needs of the individual are seldom adequately satisfied, while too frequently the star athlete in the secondary school is exploited and "burned out."

I give you Richard Mulcaster—scholar, educational philosopher, and practical teacher—whose books published about 1575 contained formulations of educational principles that are startlingly modern today—in spite of the Elizabethan English—who anticipated Rousseau, Pestalozzi and Froebel by about two centuries—and whose name and work are practically unknown!

The standards of clear thinking and the accurate use of language advocated by Corderius and Mulcaster have been pretty generally adopted by all the learned professions: medicine, pedagogy, science and, perhaps the church—but not the law. The lawyer still tends to express his thoughts in the good old circumlocution of the Middle Ages with a general admixture of the bastard Latin that these two 16th century teachers avoided like the plague!

There are many other examples of modern usage of things and procedures that were commonly used in the ancient times: occupational therapy for the mentally sick in Greece and old Egypt; Philippe Pinel used work as a cure for the insane; our own Benjamin Rush regarded occupations such as embroidery, gardening, cobbling, and farming as "valuable measures for preventing outbreaks." Also, Rush noted in his list of causes contributing to insanity "badly decayed teeth." How that would have pleased Dr. Cotton!

A Harvard expedition recently reported that the history of the Hopi Indians had been traced back to the 5th century A.D. and that they mined coal, and used it for heating their dwellings and firing their pottery in the 13th century.

Herodotus reports that: "The ancient Babylonians had no physicians, so when a person was sick the family took him to a public place. No one was allowed to pass without asking what the ailment was, and

to give advice—telling the patient what had helped the passerby or his friends." This may be the origin of our strong tendency to give medical advice to our ailing friends.

I don't want to give the impression that these instances which I have mentioned have no more significance than to serve as mildly entertaining examples of the generally unrecognized debt that our western culture owes to the past ages. On the contrary, I think that these selections from many similar cases should stimulate us to wonder whether there may not be other practices or ideas that might be valuable to us *still undiscovered* in the cultural records of the practically forgotten past.

The teacher who can stimulate in his pupils an interest in selected records of former ages, and the librarian who can point the way to these early sources will perform a great educational service, particularly in the field of the fundamental medical sciences. Such reading may help to develop a new appreciation and respect for the habits of using the senses of sight, touch and smell which enabled these earlier doctors and sceintists to make such astonishing discoveries and formulations without the aid of modern mechanical aids and laboratory procedures. Our own powers of observation and analysis of the findings in the examination of patients have become blurred by disuse and by too great dependence on the apparatus at our disposal. Also, reading of this type may help to give us perspective since we tend to be more than a little conceited, and to be over-impressed with our own cleverness.

AVIATION AND MEDICINE*

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IT IS, I believe, safe to assert that the affiliation of medicine and aviation began in prehistoric times, for our remote ancestors undoubtedly had dreams quite similar in nature to those of modern man, although luckily they lived before Freud and his disciples came to distress our minds with their interpretation of the medical significance of dreams. We "flew through the air with the greatest of ease" in our dreams long before we ever saw an airplane, and we all thought of it as good clean fun until the psychopathologists began their interpretive guesswork and forced us, through fear and shame, to abandon the good old indoor sport of fireside discussion of the nocturnal vagaries of our minds. Mythology and history record the fact that man has ever looked with envious eyes upon the flight of birds, and marveled at the apparent ease of this method of locomotion. He has, ever since recorded time, written in prose and in poetry of the desire to fly, of the longing for wings to transport him to terrestrial rendezvous, or to celestial fields of bliss.

Ancient writings vaguely refer to the construction of a flying machine before the Christian Era. There are many allusions to the science of aviation in the history of India, some as early as 500 B.C. It would appear that the Brahmins possessed "Flying Carriages," which they used in war to the confusion of their enemies. Their plan of construction and their capabilities and limitations in flight, are not clearly defined, but it is mentioned as a fact that on one occasion the King of Ceylon was defeated, and the victorious Hindu chieftain took his flying carriage and flew to the capital at Ajudhia in northern India. As the centuries advanced, other flying carriages were mentioned in the great epic poems of India. In the Sanskrit classics many aeronautical terms are used, words referring to propel and to ride in a flying carriage, an aeronaut, a procession of such carriages. There is no reference to their use in medicine, unless we credit the stories of their destructive force with making more work for the surgeons of that time.

History does, however, link medicine with the airplane, for the first material step toward the attainment of successful flight was accomplished by a physician, Leonardo da Vinci. In the fifteenth century he conceived

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the idea and constructed models of the helicopter and succeeded in making them sail through the air. To him also is attributed the principle of the aerial screw. We know today of no way of successful air flight or of high speed travel on the water without the use of the aerial screw in some of its modifications. The airplane propeller was not, as many think, modeled after the ship propeller. Both are copied from the aerial screw, for the invention of which we must give credit to da Vinci. He also was the first to promulgate the principle of the parachute. I quote from his writings: "You are to remember that your bird (flying machine) ought not to imitate anything but the bat because the membranes form an armour or liaison to the armour, that is to say, strength to the wings, and if you imitate the wings of the feathered birds, the wings are more powerful in bone and nerve though being pervious, that is to say, the feathers are disunited and permeable to the air. But the bat is aided by the membrane which binds the whole and is not pervious."

These observations of da Vinci's are in line with modern airplane construction. He was a member of the Guild of Physicians and Apothecaries of Florence and studied anatomy at the hospital at Sta. Maria Nuova. Thus, we may at this early date join medicine with aviation, for da Vinci's anatomical studies were undoubtedly an important factor in his constructive attempts to solve the problem of human flight. But, da Vinci declared that he dared not pursue the subject of flight any further, for he believed it would develop as a force for evil, and not as an instrument for the good of mankind. It is important to remember this, considering how the airplane has been and is now being developed as an engine of injury and a dealer of destruction and death. In the daily papers ten days ago a picture showed the manufacture of bombing planes in England, stating that "air craft production is now reported as 1000 war planes a month, which is claimed to exceed the German output." This great effort and vast expense is concerned, not with the saving of lives, but with destroying them. So much the more need then for medicine in aviation. More doctors will be required to mend and patch the many more mangled humans to whom these planes will bring calamity.

There are many conditions connected with the peace time operations of planes which create the need of medical skill, and as in other branches of medicine, doctors are interested in prevention as well as in cure. So, another specialist has been added to professional circles—the Flight Surgeon. Realizing that for the protection of life and property, aviators should have special mental and physical qualifications, Germany in 1910 and later England and France took action toward their selection after medical examination. In 1917, the U.S. appointed a board of officers to formulate rules for the physical and mental examination of candidates.

In 1919, the U. S. Army introduced, as a part of its training, an "Air Service Medical Research Laboratory and School for Flight Surgeons." The school was located at Mitchel Field, Long Island, and later moved to Randolph Field, Texas. It is known as the School of Aviation Medicine. In addition we have a medical section in the office of the Chief of the Air Corps, specialists engaged in research at Dayton, Ohio, and extension courses for Medical Reserve Officers. Also the Naval Department has a division of Aviation Medicine and some of the naval surgeons are graduates of the Randolph Field School. It has Flight Surgeons on air craft carriers, and at Air Stations.

According to the *Army Medical Bulletin* a Flight Surgeon "must be tactful, sympathetic, tolerant, have initiative, be well balanced, a good mixer, and of unquestionable character and habits." He must possess a thorough knowledge of general medicine and have had good training in general surgery. In addition he must have a good working knowledge and experience in diagnosis in those branches of medicine which shall especially apply in the examination and care of pilots. He must be sure that the pilot has a clear intelligence, a well balanced mind which will not be likely to become upset under emergencies, a heart that will withstand the strain and stress of flying conditions. He must be sure that the pilot's eyes can accommodate vision for distance, as well as for a clear view of things as near as the many readings he must frequently take from the instrument panel before him. The pilot's ears must do more than enable him to hear well, for the ear is important in its functions of detecting motion and direction. The Flight Surgeon must be a graduate of the Aviation School of Medicine and should maintain an interest in research problems connected with aviation.

There are at present over 600 Flight Surgeons in the U.S. who are responsible for the selection and the condition of 17,000 licensed pilots, and 36,000 active students of aviation. The British Air Force reports that before physical examination of pilots was established, it was estimated that in 100 crashes 90% were due to physical and mental incapacity of pilots, 8% to mechanical defects, 2% to the enemy. Careful examination with rejection of those deemed unfit reduced the crashes due to physical defects to 12%. It is the opinion of experts in aviation that youth is essential in the fighting pilot but that safety to the passenger is best assured by maturity and experience. The older pilot, if he keeps fit, should be the best for commercial flying.

Aviation medicine is really preventive medicine, as its purpose is to prevent accidents and conserve life by careful selection of pilots. The prospective passenger, uncertain of the effect flying at a height might have upon him, will do well to consult the Flight Surgeon as a specialist. Generally, flying is unadvisable for patients with active tuberculosis, or with advanced cardiac trouble, although individuals accustomed to fly-

ing sometimes seem to come to no harm, even though they have a marked structural defect.

We can see from this that the Flight Surgeon has been developed not alone as a doctor who flies to the scene of an accident and renders first aid. That duty is a rather infrequent incident of his daily work. His major duty is a study of the causes of crashes and of the means for their elimination. People are not hurt going up, but the cause of the crash often flies up with them. A former chief of the U. S. Air Corps, has written that it is believed that more than half of the flying calamities are due to error on the part of the personnel, or to undetermined causes, that less than 5% are due to mechanical failure.

Probably the most efficient organization for the purpose of saving human lives is the Coast Guard of the U. S. Treasury Department. As early as 1927, the airplane was accepted as a superior vehicle for carrying out life lines and dropping them over ships in distress. Now an amphibian plane is included in the equipment of the Coast Guard. It includes as one of its functions, the saving of life by prevention, for it searches for missing crafts, for ships in distress and it sometimes adds to marine safety by sinking dangerous derelicts with explosives. It has met forced-down aircraft and transported sick and injured from ships.

In the year 1937, the U. S. Coast Guard covered 5,826,000 square miles of open sea, assisted 322 vessels and brought 2028 passengers to a safe haven. Even when no danger threatens the ship, the Coast Guard often acts to bring relief to sick sailors or passengers. Freight ships are permitted by law to carry up to sixteen passengers without providing a doctor on board. It is not an uncommon practice to summon, by radio, a Coast Guard plane which transports the sick to a hospital on land.

The airplane plays an important part in medicine in times of disaster, transporting doctors, nurses, medicines, food and clothing in much quicker time than could otherwise be done. Lives were undoubtedly saved, and suffering lessened by this method in the Mississippi and other floods, in the Florida and New England hurricanes and in other unusual calamities. Aviation literature is filled with accounts of medical aid given in places inaccessible by other means or given in a few hours when it would have taken almost as many days by other means, and would have in some instances, been too late for benefit.

In the Canadian wilderness, both above and below the Arctic Circle, much has been done to bring medical aid to isolated trappers, miners, and explorers. Planes have taken doctors and medicine to them and in a number of cases brought back injured or sick men to hospital and nursing care.

Australia has a regularly organized radio and airplane medical service covering its vast inland area where rather primitive living conditions

prevail among the sheep-herders, cattlemen, and mining prospectors who mostly comprise the inhabitants of this region. About two-thirds the size of the U.S., its scattered population numbers about 200,000 white and a few thousand aborigines. The Australian Inland Mission was established in 1912 for the purpose of helping these people from the physical as well as the spiritual viewpoint. As the airplane developed and was made available, its use was adopted for the purpose of carrying medical aid. It is the aim of the mission to have a doctor stationed within 200 miles and a nurse within 100 miles of every family in the interior and to provide radio service for calling, and airplane service for conveying them. The planes now in use accommodate a doctor, nurse, patient and one relative. It is hoped to secure planes that will in addition to these carry an anesthetist and a surgical unit.

Medical science has been said to be the only science which works continually to bring about its own elimination as a necessity of life. It struggles persistently with many research workers and with the expenditure of many millions of dollars of somebody's money to bring about the prevention and cure of disease, but, as new remedies are discovered and additional means of combating illness are developed, the need of medical research and service seems to increase. Today we see that while the airplane has become a help in preventive medical work, it also has grown to be a great menace in its distribution of the causes of disease.

Air travel has brought to man a great saving of time consumed in getting from one place to another. It may be asked if this economy of time is of any real value to the world in general, for in saving a few days time to a few men, disease and death has been brought to many. These time-saving planes sometimes harbor stowaways whose mission in life seems to be the confusion and destruction of man. Number one stowaway is the mosquito.

Osler characterizes malaria as the greatest single destroyer of the human race. There are over 3,000,000 recorded deaths from malaria per year. The most deadly of all malaria bearing mosquitoes is the anopheles gambiae of the West African Coast. Natal, Brazil, the nearest point on the western hemisphere to the eastern hemisphere has an air station where planes from French West Africa regularly land.

Scientists from the Rockefeller Foundation were at Natal engaged in the work of control of yellow fever where they incidentally found the gambiae in a pool of water within the city limits. An outbreak of malaria of unusual severity began. The scientists sent for help in attempting to prevent the spread of this mosquito. They knew that if it reached the well watered river valleys 500 miles to the south and west of Natal, it would get beyond control and might spread over the continent, eventually passing through Central America and to the Northern Continent. Last year, the third year after its discovery, gambiae had carried malaria 200 miles west of Natal. The inhabitants of the Jaguaribe

valley could not carry on their farming or other tasks because 9 out of 10 of them had malaria and 1 in every 10 of these died. Over 50,000 cases of malaria were reported.

The most dangerous infectious diseases seem to be Yellow Fever, Plague, Asiatic Cholera, and Smallpox. The greatest menace in the world today is said to be the possible spread of yellow fever to India. The climate is favorable to the perpetuation of this mosquito, its 400,000,000 inhabitants have never been exposed to yellow fever, hence have acquired no resistance, no degree of immunity toward it. They are poorly nourished, badly housed and live under most unsanitary conditions. From the medical standpoint, they would be classed as very susceptible.

Yellow fever is endemic on the west coast of Africa, on the east and north coasts of South America, and on the east and west coasts of Central America. Plague exists in India, South China, and in the Straits Settlements.

Thirty-two species of mosquitoes as well as certain flies, ticks, and bedbugs carry the virus of yellow fever. Any of these can be carried from Sudan to India by the planes of the Imperial Airway and a recent report of the U. S. Public Health Service cites that 24 of 69 planes arriving at Miami from South American ports carried mosquitoes. Measures for control and destruction of these dangerous stowaways have been universally adopted by airplane companies. Pan American Airways include these precautions: vaccination of all flying personnel, careful inspection of passengers to eliminate those infected, and systematic destruction of all mosquitoes and insects on all airplanes.

The old aphorism, "There is some good in the worst of us," applies to the airplane as well as to humans. In one of its good moods, it becomes one of the most effective methods of destroying disease bearing insects. Spreading insecticides over a swathe 300 feet wide, traveling at a speed of 80 miles an hour, at a cost of about 70 cents per acre, it will cover about 500 acres an hour. This is very effective in killing the larvae if the water is not covered with close vegetation.

Insects which carry disease are not the only ones which affect the health and life of mankind. Man's problem of providing for his sustenance is greatly increased through the multiplication of innumerable insects of many species that consume or otherwise destroy food vegetation. Man is able to control and if he wishes, to exterminate animal life larger and physically stronger than himself. It has been said that he has conquered all wild animals and all but two domestic ones—cats and women. However, when beset with the numberless hordes of the tiniest things in animal life, he seems nearly helpless. Again the airplane enters in one of its beneficient moods, and spreads poisons in great quantities over large areas in quick time, at lost cost.

The Bureau of Entomology and Plant Quarantine, of the U. S. Deportment of Agriculture, reports that in 1937 airplanes distributed

about 45 million pounds of the 270 million pounds and the 191 million gallons of insecticide used for insect control. In spreading this highly toxic material for the destruction of harmful insects, some of a beneficial nature must succumb. With this enormous amount of poison spread over our country every year, one may well speculate on whether it will all be rendered harmless by the elements. If we do not control the food destroying insects, we will die of starvation and lethal chemicals have as yet been the only practical means of getting control of them in large enough numbers to do any good. Airplane distribution seems not to have added to the dangers.

The Federal Government has taken cognizance of the fact that residues of these sprays often remain on the fruits, berries, and vegetables, and distributors are obliged by law to remove such poisonous contamination before they enter commerce. They must also warn packers of canned goods of the dangers of the possible presence of poison. Children and others often eat unwashed fruit and vegetables. Even when washed, traces of poison often remain between leaves of certain vegetabls such as lettuce and cabbage and in the blossom and stem ends of fruit. Cases of poisoning in this manner have been reported but airplane dusting of poisons is no more dangerous in this instance than is hand or ground machine distribution of poisons.

CONCLUSIONS

In summing up the factors in the use of the airplane as it affects and is affected by the science of medicine, it appears to me that medical science is doing its best to render the plane less dangerous and more useful to man, and that military science is constantly seeking to make it more destructive to human life and property. As a time saving device, it has no equal in transporting man from place to place, but does the saving of a few days time to a few men traveling from Africa to South America condone the death of thousands to whom they brought the deadly gambiae. Medical and aviation records show that some lives have been spared by the timely aid of the airplane. Military records show many hundreds of thousands killed and injured, not only men but women and children, and millions of dollars worth of property value destroyed in recent years. Papers still report this devastation as a daily routine. It is no longer shocking news.

I have not mentioned those killed in transport on peaceful missions. The airplane companies figure so many passengers and pilots *lost* to so many millions of miles of travel. Most of us amateur figurers would reckon so many passengers and pilots *killed* to so many carried.

I find little record of advancement in the development of the airplane as a life-saving machine, but I do note that nations point with pride to their accomplishments in making more and bigger and faster and more deadly and better planes for the purpose of killing and man-

gling their fellow human beings. Those who conceived the idea of the plane and those who developed that idea to its practical application probably had no thought of its use except as a means of adding to the welfare of mankind. To this end the commercial companies are making every effort. They are doing more to make the airplane safe, useful, and economical for us than the public realizes and they are accomplishing much in the expansion of medical service to overcome and keep under control the dangers to health and the bodily injury that are involved by the use of planes for transport.

All this effort is overshadowed in these troublous times by accounts of the apparently unlimited expansion in the production of planes for destructive uses, so we are forced to reach the conclusion that the airplane has not advanced civilization, it has not added to the well being of mankind, it is a menace to his comfort, his peace, his safety, his security and his life, and that Leonardo da Vinci was right. It has become an instrument of evil, not a force for good.

REFERENCES

BAUER, H. L. and MACLAKE, W. Air Medical Service and Flight Surgeon. *Military Surgeon.* **46:**40. January 1920.

BAUER, L. H. Aeronautics and the Practice of Medicine. *Journal of Aviation Med.* **1:**81-95. 1930.

BENJAMIN, JAMES D. Aviation as a Medical Problem. *Military Surgeon.* **53:**218. September 1923.

BISHOP, L. F., JR. *Is It Safe for a Heart Patient to Fly? Journal of Aviation Medicine.* **9:**3-17. March 1938.

BOONE, A. R. Flying Life Boats Make Thrilling Rescues at Sea. *Popular Science.* **131:**56-57. December 1937.

CERES, F. Medical Aspects of Naval Aviation. *U. S. Naval Med. Bull.* **26:**271. April 1928.

COOK, S. S. and WILLIAMS, L. L., JR. Anopheles Control. *Southern Medical Journal.* **21:**754. September 1928

FEREE, C. E. and RAND, G. Human Factor in Airplane Crashes. *Archives of Ophthalmology.* **18:**789. November 1937.

GREEN, RALPH. Air Transport Flying from the Medical Standpoint. *Journal of Aviation Medicine.* **10:**12. March 1939.

HENRY, ALICE. Flying Doctors. *Survey.* **41:**13-16, 55-56. October 1, 1928.

HART, IVOR B. The Mechanical Investigations of Leonardo da Vinci. Chicago, 1925.

MUNROE, D. Use of Airplane in Medical Services in War. *Proc. Roy. Soc. Med.* **17:**7-12. February 1924.

NEUBERGER, J. F. Medical Aspects of Naval Aviation. *Military Surgeon.* **49:**39. July 1921.

———. Aviation Medicine in the U. S. Navy. *U. S. Naval Med. Bull.* **17:**34. May 1922.

SCHNELL, W. Physician in Relation to Aeronautics. *München Med. Wehnschr.* **68:**737. January 17, 1921.

SIMMONS, J. S. The U. S. Army's War in Air against the Mosquito Borne Diseases. *Amer. Journ. Med. Sc.* **196:**153-167. August 1938.

VACCARO, L. Leonardo da Vinci, Precursor of Modern Medicine. *Medical Life.* **35:** 59-66. 1928.

VANN, J. Aviation Medicine. *U. S. Naval Med. Bull.* **35:**55-59. January 1937.

WATSON, R. B. Preliminary Observation in Airplane Dusting for Anopheles Larvae Control. *Southern Med. Journal.* August 1938.

WATSON, KIKER and JOHNSON. The Role of Airplane Dusting. *Public Health Report.* **53:**251. February 18, 1938.

WINTERS, S. R. Life Saving Airplanes. *Scientific American.* December 1927. p. 497.

ARE "COLLECTED PAPERS" WANTED?

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IF ANY excuse is needed for publishing these remarks a perfectly sound one is available. This paper is intended to assist in the abolition of a form of publication which is, in the writer's opinion, redundant, frequently useless, and an unnecessary expense to the producers. It is a kind of growth that must be cut out, and it is fortunate that the trouble has been recognized both by librarians and by some medical scientists, so that some alleviation of the pain caused has been possible. No medical librarian will need telling that I allude to "collected papers," for this peculiar type of periodical has been in existence for at least half a century, and has been developing steadily since its conception. The nuisance has of course become greater as the number of periodicals increased, and now that many voices are demanding the rigorous limitation of published material this review of a related problem is quite in season. It should be clear, however, that this article is concerned with the form and not the substance or purpose of collected papers. It is the form which prevents their use, for it effectively buries them without a trace.

"Collected papers," to use the name most commonly given to those volumes of reprinted material, are a source of annoyance to other than medical librarians, but the number of such publications in other sciences is still small, although it seems to be growing. Within the range of the medical sciences there are probably at least two hundred current publications of this kind. In the appendix to the Medical Library Association's report on serials containing reprinted material[1] eighty-five items published in the United States and Canada were given. In addition, at the end of the present paper will be found a list of forty similar publications issued in the British Empire (excluding Canada). Many institutions in other parts of the world are adding to the total. All these titles occupy space in the bibliographies and finding lists of medical and scientific periodicals; it is often difficult to identify them from their titles, and a further complaint one has to make is that some of them contain both original and reprinted material.

American medical librarians are more familiar with the size of the problem than are their fellows in England. It will be remembered that

the Medical Library Association issued a questionnaire on the subject in connection with the survey of medical periodicals in 1935; the results were summarized in the above-mentioned report. It will be convenient to recall here that replies were received from one hundred and fourteen libraries, of which one hundred and four were in receipt of some of these publications; twenty-nine were receiving 25 or more, and twenty-seven were receiving between 10 and 25 series. Only seven libraries out of the eighty-eight which were keeping this material permanently were indexing and analyzing the contents of these publications. It may be assumed that most of the others were unable to undertake the work which such treatment involves, especially if shelves of back volumes have not received attention. It was also stated that twenty-one libraries indicated that these collected papers were extensively used as against eighty-three which gave a negative reply. It is really surprising that as many as twenty-one should have answered affirmatively, seeing that two-thirds at least did not index the contents of their holdings. One would like to know exactly how they are used. Knowledge of the personnel of various institutions can help in tracing papers, but it is usually limited, and often possessed less by librarians than by the scientists themselves. Some librarians tear volumes of reprints apart, but this method is not always convenient, especially when the volume is a whole and not a collection of reprints laced or fixed together.

Various methods have been proposed for dealing with this material, but all are unsatisfactory owing to the time and expense involved. For example, co-operative cataloguing would be very costly on account of the small number of copies needed; most series of collected papers are extremely limited in numbers. The objection to individual cataloguing has already been noted, but it may be mentioned here that some libraries catalogue items from journals not taken by them. This plan has its merits, but may leave untouched much that could be made useful. Another suggestion is that this material could be indexed in the medical bibliographic indexes. That most indispensable tool, the *Quarterly Cumulative Index Medicus* at once springs to mind, but on examination certain difficulties, physical and otherwise, present themselves. The work of indexing, in the first place, could not be done by the editors, for the reason that the issue of reprints in collected papers frequently occurs two or three years after the original publication. Each individual library would therefore be left to do the work, which would be a slow business. It would mean pasting in entries for items not found in the *Index,* e.g., articles from symposia and non-medical journals, as well as for theses, often included in series from France and the Netherlands. These slips would not last long where the *Index* is much used. Finally one would be confronted by the whole series of half-yearly volumes of the *Index Medicus,* lacking the important advantage of a single author index to

every volume of collected papers. (How many references brought to the librarian omit the date or quote it incorrectly!)

The most practical suggestion is that these publications should be issued as separata, and I shall discuss that last. But first it must be observed that such a solution does not remove the sets of bound volumes already acquired. It would seem that the only way to deal with these is to index them, and since most librarians cannot afford the time for analytical cataloguing I should like to describe an index which is employed in the Thane Library of Medical Sciences here at University College, London. (I have recently described it elsewhere,[2] but as few readers of the *Bulletin* will have seen that paper I am taking the liberty of giving a short account of it here.) It was originally intended by the writer as a temporary index to the *Studies from the Rockefeller Institute for Medical Research,* as the published indexes only serve the first fifty volumes, up to 1924. As the result of a search it was discovered that the library possesses over forty series of collected papers, eighteen of them being in progress. It was then decided to include some of the more useful series in the index, and at present twelve such publications are treated in this way. It may be noted that the time taken by the junior assistant in making the entries has been largely repaid by the time saved through finding reprints by means of the index. The assistant would otherwise have been sent out to other libraries in London for the journals needed.

Briefly, the system is as follows. A card is made for each author, as many references as possible being entered on one card; cases of joint authorship are given separate cards. The only details given are the date of the paper and the reference to the volume of collected papers in which it is to be found. A code of abbreviations for the titles of the various series reduces the work considerably. Thus the symbols on the card illustrated refer to the volumes of the *Collected Reprints from the Department of Anatomy, Cornell University Medical College.*

STOCKARD, C.R.

CU.

1913	4.1-2, 4.	1924	10.4-5; 11.1.
1914	4.3; 5.8.	1925	11.2; 12.1.
1915	5.2, 5-7.	1926	11.4.
1916	5.9; 6.5.	1927	12.2.
1919	7.4.	1928	13.1-5.
1921	8.1-2; 10.2.	1929	14.2-3.
1923	9.1; 10.1, 3.	1930	14.1, 4.

Thin cards, 12.5 cm. by 7.5 cm., are used, and the index is kept beside the counter where the assistant is on duty. The library possesses a very large collection of separate reprints, and so the occasions when the index is consulted are not very frequent. Nevertheless, it is felt that it is worth while.

It remains for me to discuss what I believe to be the only desirable remedy for the existing state of affairs. In many library bookstacks these publications are hidden away and forgotten, and—if merely sewed in paper wrappers—beginning sooner or later to fall to pieces. If those reprints had been received as *separata* it would have been possible to treat them in the same way as other separate reprints. In this library it is usual to catalogue and classify the more important items, the remainder being arranged under authors' names and filed in boxes. Duplicates can be given away or exchanged. But whatever the method employed the result is far more satisfactory.

How can this be brought about? In the first place every librarian of an institution which publishes such volumes can help by approaching the authority concerned. It is not unnatural that those responsible for these publications should be unaware of our problem, for they do not see those neglected shelves. Much could be done by individual effort, and it should not be left to the professional organizations to initiate the move, although some official action will probably be needed to complete the reform. The arguments in favour of the separate issue of reprints are several, and mostly obvious. Some have been stated above, such as the convenience in handling *separata,* as opposed to the difficulties met with in using bound volumes. The saving in binding or sewing costs should appeal to everybody, and it should be pointed out that any institution can bind its own set of papers to preserve them. An advantage of paramount importance to the intended users of the reprints is that the serious delay often incurred in assembling papers for issue would be avoided, and a half-yearly distribution should be possible in most cases. At present far too many papers are so out of date when received that they have lost much of their original value. A stencilled list should be sent for reference, and institutions with several departments might consider asking intended recipients to apply for items desired before dispatching any; much misdirected material is received by libraries. If the change can be brought about the results will benefit all concerned.

REFERENCES

[1] *Bull. Med. Lib. Ass.* **25**:46-47, 1936.
[2] *Lib. Ass. Record.* **41**:425-426, 1939.

APPENDIX

List of Current Periodicals Containing Reprinted Material Issued in the British Empire, Excluding Canada

1. Alfred Hospital, Melbourne. Baker Institute of Medical Research. Collected papers. (Sewed; 3-4 years.)
2. Australian Institute of Tropical Medicine, Townsville, Queensland. (Published 4 volumes of collected papers; in 1930 was merged in the Commonwealth School of Public Health and Tropical Medicine at the University of Sydney, *q.v.*)
3. British Postgraduate Medical School, London. Collected papers. (Loose; annually.)
4. Brompton Hospital (London) Reports. A Collection of papers recently published, *etc.* (Bound; annually.)
5. Calcutta School of Tropical Medicine. Annual report. Appendix A: Collected papers from The Indian Journal of Medical Research; Appendix B: Collected papers from The Indian Medical Gazette. (Separate volumes; sewed.)
6. Edinburgh. University. Department of Pharmacology. Collected papers.
7. Edinburgh. University. Department of Physiology. Collected reprints.
8. Edinburgh. University. Department of Surgical Research. Collected papers. (Bound; vols. 1-2: To 1935.)
9. Glasgow. University. Institute of Physiology. Collected papers. (Sewed; n.s., vol. 1, 1934).
10. Hannah Dairy Research Institute, Kirkhill. Reprints. (Loose.)
11. Henry Lester Institute of Medical Research, Shanghai. Collected papers. (Bound; annually.)
12. Henry Lester Institute of Medical Research, Shanghai. Division of Pathological Sciences. Collected papers. (Bound; annually.)
13. Henry Lester Institute of Medical Research, Shanghai. Division of Physiological Sciences. Publications. (Reprints; now loose?)
14. Imperial Cancer Research Fund, London. Scientific reports. (Includes reprints; bound.)
15. Jerusalem. Hebrew University. Department of Hygiene. Contributions. (Reprints, bound; annually.)
16. Lister Institute of Preventive Medicine, London. Collected papers. (Sewed; annually.)
17. London. University. King's College. Department of Physiology. Collected papers. (Now loose.)
18. London. University. University College. Department of Physiology, Pharmacology and Biochemistry. Collected papers. (Sewed; 2-3 years.)
19. London. University. University College Hospital Medical School. Graham Research Department. Collected papers. (Now loose; 2-3 years.)
20. London County Council. Archives of Neurology and Psychiatry. (Now only reprints, bound; 3-4 years.)
21. London Hospital. Researches published from the Wards and Laboratories. (Sewed; annually.)

22. Manchester. Victoria University. Pathological Department. Collected papers. (Bound.)
23. Medical Research Council. National Institute for Medical Research. Reprints. (Loose.)
24. Melbourne. University. Science Laboratories. Collected papers. (Bound; vols. 3-6 each cover 1910-1928, divided by subjects.)
25. Middlesex Hospital, London. Medical School. Collected papers. (Stapled; annually.)
26. Otago. University. Dunedin, N. Z. Medical School. Proceedings. (Reprints, bound; annually.)
27. Oxford. University. Department of Pathology. Collected papers. (Bound; last issue covered 1914-1934.)
28. Papworth. Sims-Woodhead Memorial Laboratory. Research Bulletin. (Original articles and reprints, stapled; annually.)
29. Pretoria. University. Reprints. (Including medical sciences; loose.)
30. Queensland. University. Brisbane. Collected papers. (From the Department of Biology, *etc.;* bound.)
31. Radium Institute. Radium Beam Therapy Research. Published papers. (Bound; vol. 1: 1935-1938.)
32. Rowett Research Institute, Aberdeen. Collected papers. (Bound; vol. 4: 1933-1939.)
33. South African Institute for Medical Research, Johannesburg. Reprints. (Loose.)
34. Sydney. University. Reprints. Series 1: Agricultural and veterinary science; Series 8: Medical sciences, clinical; Series 9, Medical sciences, non-clinical. (Sewed; 2-3 years.) Monograph Series. (Reprints, separately.)
35. Sydney. University. Commonwealth School of Public Health and Tropical Medicine. Collected papers. (Bound; No. 1: 1930-1935.)
36. Thomson-Yates Laboratory. Liverpool. Reports. (Now reprints, bound; 4 years.)
37. Wales. University. Physiology Institute. Welsh National School of Medicine. Cardiff. Collected papers. (Stapled.)
38. Walter and Eliza Hall Institute of Research in Pathology and Medicine. Melbourne. Collected papers. (Sewed; 2 years.)
39. Wellcome Chemical Research Laboratories. London. Papers. (Reprints; loose.)
40. Wellcome Physiological Research Laboratories. London. Collected papers. (Loose.)

* This list is as complete as my own means of survey can make it. It has been compiled mainly from the World List of Scientific Periodicals, 1900-1933, and from the Union Catalogue of Periodical Publications in the University libraries of the British Isles, 1937. To the titles I have added details as to binding and intervals of publication. I am indebted to certain librarians for information concerning various items, and especially to Mr. C. C. Barnard, Librarian of the London School of Hygiene, and Mr. W. R. Le Fanu, Librarian of the Royal College of Surgeons, and their staffs, for assistance in tracking down periodicals suspected of containing reprints.

EXHIBITIONS

PRINTING AND MEDICINE

A SELECTION OF BOOKS IN THE NEW YORK ACADEMY OF MEDICINE LIBRARY, EXHIBITED IN CONNECTION WITH THE CELEBRATION OF THE 500TH ANNIVERSARY OF THE INVENTION OF PRINTING

Prepared by

GERTRUDE L. ANNAN,

Rare Book and History Department

IN PREPARING this exhibit, no attempt has been made to secure important works not in this collection. The books displayed have been chosen from our shelves to portray in some measure the influence of the invention of printing on medical thought as well as on its presentation. The scope is necessarily limited by the facilities available for exhibition purposes.

THE EARLY YEARS OF PRINTING

In the second half of the fifteenth century the ideas of the Arabian physicians were slavishly followed. The works of the medieval and early Renaissance writers were based for the most part upon the writings and commentaries of their Arabian predecessors. Their texts were studied in the medical schools almost to the exclusion of the classical authors, whose influence the new invention was destined to be instrumental in reviving. The early printed medical works reflect the dominant ideas of the time.

1.) Avicenna. 980-1037. Liber canonis . . . de medicina . . . Venice, [Petrus Maufer et socii], 1486.
This work dominated the practice of medicine for five centuries.

2.) Mesue. XIth cent.? De consolatione medicinarum simplicium . . . Pavia, Franciscus de Sancto Petro, 1478.
The most popular medieval compendium of drugs.

3.) Rhazes. d. ca. 923. Nonus liber Almansoris . . . Venice, Bernardinus Stagninus de Tridino of Montferrat, 1483.
"Source of therapeutic knowledge until long after the Renaissance."

4.) Guy de Chauliac. ca. 1300-1368. Cyrurgia. Venice, Bonetus Locatellus for Octavianus Scotus, 1498.
The leading surgical textbook from the late fourteenth century until the publication of Paré's work.

5.) Mondino de' Luzzi. d. ca. 1326? Anathomia . . . Leipzig, [Martin Landsberg, ca. 1493.]
A popular pre-Vesalian anatomical textbook.

6.) Nicolaus Salernitanus, early XIIth cent.? Antidotarium. [Pavia, Franciscus de Sancto Petro, 1478-79.]
This formulary, called the basis of all later pharmacopoeias, shows the influence of Arabian doctrines. This is the only recorded copy of this edition.

7.) Brunschwig, Hieronymus. fl. 1500. Buch der Cirurgia . . . Augsburg, Johann Schönsperger, 1497, opened at fo. n_5r.
An early surgery, illustrated with woodcuts and published in the vernacular.

8.) de Ketham, Johannes. XVth cent. Fasciculus medicinae . . . Venice, Johannes & Gregorius de Gregoriis, 1495, opened at fo. e_2v.
The first edition of this work, published in 1491, has the distinction of being the first printed medical work containing illustrations. Of the woodcut shown above, depicting a dissection, Mr. William M. Ivins, Jr., says, "This picture provides unequaled material for an understanding of the methods of teaching and scientific research in vogue at the time."

9.) Metlinger, Bartholomäus. d. ca. 1491. Ein Regiment der jungen Kinder . . . Augsburg, Johann Schaur, 1497.
This little book in the vernacular is the first printed work on paediatrics to contain an illustration.

REVIVAL OF CLASSICAL TEXTS

"Prime movers in this change for medicine were the great printers of the Renaissance and the so-called 'medical humanists' . . . With the medical philologists came the critical questioning spirit of medicine." (Garrison).

10.) Celsus, Aurelius Cornelius. Ist. cent. De medicina. Florence, Nicolaus Laurentius, 1478.
One of the earliest classical authors to be appreciated.

11.) Hippocrates. b. ca. 460 B.C. Octoginta volumina . . . nunc tandem per M. Fabium Calvum Rhavenna . . . latinitate donata . . . Rome, Franciscus Minitius Calvus, 1525.
The first complete edition of the collected works of Hippocrates. The translator was the physician, Marco Fabio Calvi, d. 1527. The work was published under the auspices of Pope Clement VII.

12.) Galen. ca. 129-200. [Opera.] Librorum pars prima [-quinta] . . . Venice, in aedibus Aldi & Andreae Asulani soceri, 1525, in 5 volumes, vol. 1 shown.
This monumental Greek edition, edited by the printer, Andrea d'Asola, father-in-law of Aldus Manutius, and the physician, Giambattista Opizzone (or Opizio), although criticized for its errors, is of considerable importance in that it paved the way for further editions and translations.

13.) Galen. ca. 129-200. Opera N. Leoniceno interprete . . . Paris, Henricus Stephanus, 1514.
One of the many publications of the erudite physician, Nicolaus Leonicenus, 1428-1524, remembered more today for his efforts in reviving Greek texts than for his medical contributions.

14.) Galen. ca. 129-200. De sanitate tuenda libri sex Thoma Linacro Anglo interprete. Paris, Guilielmus Rubeus, 1517.
A pupil of Leonicenus, Linacre, ca. 1460-1524, English physician and scholar, was also responsible for many translations of the classics.

15.) Paulus Aegineta. VIIth cent. Opus de re medica . . . latinate donatum, per Joannem Guinterium . . . Paris, Simon de Colines, 1532.
Johann Guenther von Andernach, celebrated in his day as a physician, bridged the gap between the old and the new. A Greek scholar, he was responsible for a number of translations from that language. An adherent of the doctrines of Luther, he was forced to flee from Paris. An anatomist, he had the honor of teaching Vesalius.

16.) Hippocrates. b. ca. 460 B.C. and Galen. ca. 129-200. Libri aliquot, ex recognitione Francisci Rabelaesi . . . Lyon, apud Gryphium, 1532.
Although the literary works of Rabelais have overshadowed his exploits as a medical man and scholar, his services should not be minimized. He was influential in bringing Greek texts to light, and he is regarded as the first to teach medicine directly from them.

THE GROWTH OF LIBRARIES OF PHYSICIANS

17.) Gesner, Conrad. 1516-1565. Bibliotheca instituta et collecta primum à Conrado Gesnero . . . iam vero postremo recognita . . . per Josiam Simlerum . . . Zurich, Christoph Froschauer, 1574, opened at pp. 292-3, showing his editions of Cardanus, p. 292, left column, and those of Fracastorius and others.
This amazing library, collected by the celebrated physician, naturalist and bibliophile, is indeed a tribute to the transformation wrought by the introduction of printing. By way of contrast are shown here the lists of two earlier private collections of medical men.

18.) Chereau, Achille. La bibliothèque d'un médecin au commencement du XV^e^ siècle. Repr.: *Bulletin du bibliophile,* Paris, 1864, opened at p. 14.
An inventory of the thirty volumes in the library of Pierre Cardonnel, physician who died in 1438.

19.) Ferrari da Grado, Henri Maxime. *Une chaire de médecine au XVe siècle . . . Paris, 1899, opened at p. [83].
This catalogue lists the eighty-nine books in the library of the Italian physician, Giammatteo Ferrari de Gradi, at the time of his death in 1472. The invention of printing had already affected the prices of manuscripts, so that the possession of a library was not as great a luxury as in the time of Cardonnel.

* Thesis.

AN EARLY INSTANCE OF COPYRIGHT

20.) Cardanus, Hieronymus. 1501-1576. Practice arithmetic . . . Milan, Joannes Antonius Castellioneus, 1539, opened at fo. SS_4r.
An early example of the power of the press. This copyright resulted in successful advertising. Cardanus, destined to become a celebrated physician, was the author of this work on arithmetic which "proved far superior to any other treatise extant." The final leaf contains a notification of copyright, dated June 25th, 1538, to be in force for ten years after the publication of any of the thirty-three works by Cardanus listed therein. Of these only two had been printed at the time. The volume found its way into Germany where it came to the attention of the printer, Johann Petreius, who offered to publish any of the manuscripts, and the learned humanist, Andreas Osiander, who promised to see the works through the press.

21.) Cardanus, Hieronymus. 1501-1576. De subtilitate libri XXI . . . Nuremberg, Johann Petreius, 1550, opened at p. 331.
The author's most important work, and one which was printed by Petreius as a result of the note published in the volume mentioned above. Of this work, Garrison says, it "shows remarkable insight into biologic phenomena." It also contains an interesting device for teaching the blind to write, as illustrated on the page displayed here.

THE BEGINNINGS OF ANATOMY AS SHOWN IN BOOK ILLUSTRATION

22.) Berengario da Carpi, Giacomo. fl. 1530. Commentaria cum amplissimis additionibus super anatomia Mundini . . . Bologna, Hieronymus de Benedictis, 1521, opened at fo. LXXXII^r.
Berengario, a "pioneer of independent research in the anatomy of separate parts of the body," was responsible for the first anatomical illustrations made from nature. Although an admirer of Mondino, Berengario did not hesitate to correct his errors.

23.) Roeslin, Eucharius. d. 1526. The byrth of mankynde . . . [translated] by Thomas Raynold . . . London, Thomas Ray, 1545, opened at fo. 63^r.
First published in England in 1540, this is one of the earliest books printed in England to contain copperplate engravings. Roeslin's work appeared in 1513. He "was the first to seize the opportunity given by the discovery of printing to publish his obstetrical treatise in German so that it could be understood by midwives." (Thoms).

24.) Canano, Giovanni Battista. fl. 1540. Musculorum humani corporis picturata dissectio . . . [Ferrara, 1541?], opened at fo. B_2r.
An early example of the use of copperplate engravings in anatomical texts, rather than on separate leaves. The author had planned to publish further parts of this anatomy of the muscles, but after seeing the unpublished woodcuts of Vesalius, he suppressed his own work.

25.) Vesalius, Andreas. 1514-1564. De humani corporis fabrica . . . Basel, Joannes Oporinus, 1543, opened at p. 174.
The magnificent volume upon which modern anatomy is based. Credit

for the perfection of this important work should be given not to the achievements of the author alone, but to the skill of the artist and the care of the printer as well.

26.) Geminus, Thomas. fl. 1550. Compendiosa totius anatomiae delineatio . . . London, John Herford, 1545, opened at fo. C_1r.
The first edition of the copperplate engravings copied after the Vesalian figures and published by the printer and engraver, Thomas Geminus. This, too, is one of the early examples of books produced in England containing copperplate illustrations.

THE BEGINNINGS OF SURGERY AS SHOWN IN BOOK ILLUSTRATION

27.) von Gerssdorff, Hans. fl. 1500. Feldtbuch der wundartzney. Strassburg, Joannes Schott, 1517, opened at fo. [LXIX]^{r}.
The earliest illustration of an amputation. The importance of this work lies in the woodcuts portraying instruments and surgical procedure of the time as well as its text based upon the experience of the author.

28.) Bartisch, Georg. 1535-ca. 1607. ΟΦΘΑΛΜΟΔΟΥΛΕΙΑ das ist/ Augendienst . . . Dresden, Matthes Stöckel, 1583, opened at fo. 62^{r}.
The first book on ophthalmology in the vernacular, this contains a description of complete excision of the eye. The illustrations demonstrate the modes of procedure in surgery of the eye.

29.) Paré, Ambroise. 1510-1590. Dix livres de la chirurgie . . . Paris, Jean le Royer, 1564, opened at fo. 111^{v}.
Paré, like other surgeons, wrote in the vernacular, so that the uneducated of his colleagues could have the advantage of his experiences. One of the best known of his achievements is the re-introduction of the ligature and its use in amputation, as pictured in the above illustration.

MEDICINE IN THE VERNACULAR

For centuries Latin held sway as the language of scientists, scholars and theologians. The prohibitive cost of manuscripts had held the benefits of literature in the hands of a few. In the sixteenth century the ability to supply inexpensive volumes brought about the publication of countless works in the vernacular for the use of the common people. Surgery and books of popular medicine led the way which was to result eventually in the death of Latin as the universal tongue of the scientific world.

Books Intended for Laymen

30.) Jung, Ambrosius. 1471-1548. Ein nutzliche trostliche . . . underrichtung/ wie man sich in disen schwären leüffen der pestilentz halten soll . . . Strassburg, Wendel Rihel, 1535.

31.) Brunschwig, Hieronymus. fl. 1500. Thesaurus pauperum. Einn fürtrefliche und volkomne Haussapoteck . . . Franckfurt, Christian Egenolff, 1537, opened at fo. I^{r}.

32.) Lobera de Avila, Luis. early XVIth cent. Vergel de sanidad . . . Alcala de Henares, Juan de Brocar, 1542.

33.) Petrus Hispanus (John XXI, Pope). d. 1277. Thesaurus pauperum. Opera nova intitulata Thesoro di poveri . . . Venice, Agostino di Bendoni, 1543.

34.) Phaer, Thomas. 1510?-1560. The regiment of life . . . London, John Kyngston and Henry Sutton, 1553.

35.) Mizauld, Antoine. ca. 1520-1578. Singuliers secrets et secours contre la peste . . . Lyon, Benoist Rigaud, ca. 1562.

36.) Here begynneth a good booke of medicines called the treasure of poore men. London, Thomas Colwell, 1560?, opened at fo. 1r.

37.) Fioravanti, Leonardo. XVIth cent. Del compendio dei secreti rationali . . . Venice, Heirs of Melchiorre Sessa, 1571.

38.) Schitler von Crossen, Johannes. XVIth cent. Ein Hausbůchlein/ in welchem die kranckheiten des gantzen leibes vom haupt bis auff die füsse/ kürtzlichen gehandelt . . . Neyss, Johann Creutziger, 1576.

39.) Benedictus Olai. 1524?-1582. Een nyttigh låkere book . . . Stockholm, Anders Torstenson, 1578. (Facsim. ed. by O. T. Hult, Malmö, 1938), opened at title-page of facsimile.

40.) Boorde, Andrew. 1490?-1549. The breviarie of health . . . London, Thomas East, 1587.

Books Intended for Physicians

41.) Galen. ca. 129-200. Du mouvement des muscles . . . Lyon, Estienne Dolet, 1541.

One of the rare examples of medicine in the vernacular published by the martyr printer, Dolet. Medical books were then occasionally translated into the common tongues, but it was a century and more before it became the common usage.

42.) Paracelsus, Aureolus Philippus Theophrastus (Bombastus ab Hohenheim). 1493-1541. Von der Bergsucht oder Bergkranckheiten . . . Dillingen, Gebaldus Mayer, 1567.

Paracelsus, rebel and iconoclast, broke away from the traditional Latin in his teaching and in his published works. This little tract is the first separate work on the diseases of miners, a landmark in industrial medicine, printed in a language the author's countrymen could understand.

CONTRIBUTIONS OF THE SEVENTEENTH CENTURY

A significant achievement of the seventeenth century was the foundation of the learned societies whose journals led to the periodical publications which today occupy first place in scientific literature. Scientific intercommunication carried on by private correspondence was necessarily limited and ephemeral. The number of journals undertaken in the last half of the century attest to the need for such printed records. A list of the names of contributors to those journals would show most of the great figures of science of the period.

43.) Le journal des sçavans . . . Amsterdam, 1679, vol. 1 for the year 1665, opened at fo. A_3r.

This edition is a reprint of the journal which first appeared in Paris in 1665 and which recorded the main occurrences of the Académie des Sciences. The note from the printer to the reader explains the aims of the publication: 1) a catalogue of the principal books printed in Europe; 2) obituaries of celebrated men; 3) experiments and discoveries in arts and sciences; 4) judgments of secular and ecclesiastic tribunals and universities; 5) anything occurring in Europe which might excite the curiosity of men of letters. This was the first independent scientific periodical.

44.) The philosophical transactions of the Royal Society of London . . . abridged . . . London, 1809, vol. 1 for the years 1665 to 1672, opened at pp. 202-3.

An abridged edition of the first scientific periodical to be published under the auspices of a society which is still in existence. The wide correspondence of the secretary, the roster of scientists as members, and the variety of subjects discussed, make this journal an invaluable record of contemporary science. This volume lies open at pages showing an observation of Malpighi's and an account of some of the early experiments on blood transfusion. The Society was also responsible for the publication of a number of outstanding books.

45.) Miscellanea medico-physica Academiae naturae curiosorum germaniae . . . Paris, 1672, vol. 1 for the year 1670, opened at fo. $\tilde{a}_4$r, table of contents.

The aim of this society was the advancement of medical science through observation, and through the communication of such observations. The table of contents shown here indicates the diversity of subjects treated.

46.) Thomae Bartholini acta medica & philosophica Hafniensia. Hafniae, 1673, vol. 1 for the year 1671, opened at fo. b_1r.

The first volume of the Danish journal edited by Bartholinus under the auspices of the medical faculty which he served as Dean, opened at the table of contents.

47.) Journal des nouvelles découvertes, concernant les sciences & les arts, qui sont parties de la médecine . . . Paris, 1681, vol. 3, opened at pp. 94-5.

This journal, though not emanating from the activities of an organized group, is worthy of display as it has the distinction of being the first medical periodical in the vernacular. The editor, Nicolas de Blegny, 1652-1722, often considered as a charlatan, has combined letters received by him with excerpts from his own pen and announcements of various efficacious remedies. The pages cited above are from the section entitled, "Nouveautez concernant la médecine & les médecins."

48.) Medicina curiosa: or, a variety of new communications in physick, chirurgery, and anatomy . . . London, 1684, title-page as reproduced in the *Medical press and circular,* London, 1939, vol. 201, p. 117.

The first English medical journal, consisting of material reprinted from various sources.

49.) Le progrés de la médecine, contenant un recueil de tout ce qui s'observe de singulier par raport à sa théorie & à sa pratique . . . par M. Brunet. Paris, 1698, vol. 3 for the year 1697, opened at fo. $\tilde{a}_1$r, table of contents.
This short-lived journal in the vernacular was edited by the physician and philosopher, Claude Brunet.

50.) Histoire [et mémoires] de l'Académie royale des sciences . . . Amsterdam, 1706, vol. 1 for the year 1699, opened at p. 28.
A reorganization of the Académie took place in 1699 and resulted in this publication which ran from that time until the dissolution of the society at the time of the French Revolution. It lies open at the section on anatomy.

ANATOMICAL ILLUSTRATION IN THE SEVENTEENTH CENTURY

51.) Remmelin, Johann. b. 1583. Catoptrum microcosmicum . . . Augsburg, David Franck, 1619, opened at p. 15.
An interesting example of superimposed anatomical plates.

52.) Aselli, Gasparo. ca. 1581-1626. De lactibus sive lacteis venis quarto vasorum mesaraicorum genere novo invento . . . Milan, Giovanni Battista Bidelli, 1627, opened at tab. 1.
This is considered the first use of color printing in anatomic illustration. This work contains the author's discovery of the lacteal vessels.

53.) Casserio, Giulio. 1561-1616. Tabulae anatomicae LXXIIX . . . Venice, Evangelista Deuchinus, 1627, opened at fo. 67^r.
"Casserius' plates mark a new epoch in the history of anatomic representation, owing to the correctness of their anatomic drawing, their tasteful arrangement, and the beauty of their technical execution. And this all the more, since they cover the whole field of anatomy and have become the models for anatomic illustrations in copper . . ." (Choulant).

54.) Harvey, William. 1578-1657. Exercitatio anatomica de motu cordis et sanguinis in animalibus . . . Franckfurt, William Fitzer, 1628, opened at plates.
Nothing need be said of the far reaching effects of this little book.

55.) Malpighi, Marcello. 1628-1694. Anatome plantarum. Cui subjungitur appendix . . . De ovo incubato . . . London, John Martin, 1675, vol 1, opened at tab. 1 of the plates of the treatise De ovo incubato.
This handsome volume was published by the Royal Society of London. The correspondence passing between the celebrated Italian physician and the secretary of the Society is published with this work. The plate shown above is one of those upon which is based Malpighi's reputation as the founder of descriptive embryology.

THE EARLY DEVELOPMENT OF THE PRINTING OF MEDICAL BOOKS IN THE UNITED STATES

Through the efforts of the Spaniards, printing was established in Mexico long before its inception in the northern part of the New World. The volumes shown here, however, are restricted to those published in

the territory of what is now the United States. In the output of the early presses here, theological works predominated, but books of laws and the ever popular almanacs also occupied important places in the lives of the colonists. Statistics show that the percentage of scientific works printed between 1639 and 1763 must have been about 1.5.

56.) Thacher, Thomas. 1620-1678. A brief rule to guide the common people of New-England how to order themselves and theirs in the small pocks, or measels. Boston, John Foster, 1677. (Photostat copy). This broadside was the first medical publication in the colonies. Thacher, a preacher and physician, who came from England in 1635, took his material from the writings of Sydenham. It was not until 1708 that a medical book was printed here, a reprint of the popular *English Physician* of Nicholas Culpeper.

The Inoculation Controversy

The fear of small-pox was ever present in the colonies, and adherents and adversaries of inoculation debated bitterly. The following selection is representative of the many pamphlets on the subject which appeared at the time.

57.) Colman, Benjamin. 1673-1747. Some observations on the new method of receiving the small-pox by ingrafting or inoculating . . . Boston, Bartholomew Green for Samuel Gerrish, 1721.
The author was a prominent clergyman.

58.) Mather, Increase. 1639-1723. Some further account from London, of the small pox inoculated. The second edition . . . Boston, J. Edwards, 1721.
The aging clergyman championed inoculation.

59.) Douglass, William. 1691-1752. Inoculation of the small pox as practised in Boston . . . Boston, J. Franklin, 1722.
This Boston physician disapproved strongly of the practice and wrote several pamphlets against it. Years later he changed his views.

60.) Boylston, Zabdiel. 1679-1766. An historical account of the small-pox inoculated in New England . . . Boston, S. Gerrish and T. Hancock, 1730.
Boylston, a physician of Boston, was the first to introduce the practice of inoculation into America.

Medical Legislation

61.) Massachusetts Bay (province). Acts and laws . . . Boston, Bartholomew Green, 1726, opened at p. 165.
Among the laws passed in the colony were a number of medical interest. An act to prevent the spread of infection is shown above. Of particular interest is an act "for preventing abuses in distilling of rhum, and other strong liquors, with leaden heads or pipes," an early recognition of lead poisoning. Others concern the relief of idiots, regulation of drains, prevention of persons attempting to conceal the small-pox, etc.

Miscellaneous Medical Works

62.) An abstract of the patent granted to Benj. Okell, the inventor of a medicine, call'd, Dr. Bateman's pectoral drops, and to J. Cluer, R. Raikes and W. Dicey . . . that they enjoy the sole benefit of the said medicine. New York, John Peter Zenger, 1731.
This early New York pamphlet contains the privilege of selling the drops in America, granted to James Wallace. A large part of the tract is concerned with the virtues of this medicine and its use in the cure of various diseases. This is perhaps the earliest work on medicine printed in New York.

63.) Every man his own doctor: or, the poor planter's physician. Prescribing plain and easy means for persons to cure themselves of all, or most of the distempers, incident to this climate . . . The second edition. Williamsburg, William Parks, 1734.
This early book on popular medicine has been attributed to the English-born physician, John Tennent, who settled in Virginia.

64.) Douglass, William. 1691-1752. The practical history of a new epidemical eruptive miliary fever, with an angina ulcusculosa which prevailed in Boston New-England in the years 1735 and 1736 . . . Boston, Thomas Fleet, 1736.
A contemporary account of an epidemic, probably of what is now known as scarlet fever.

65.) Kissam, Samuel. fl. 1771. An inaugural essay on the anthelmintic quality of the phaseolus zuratensis siliqua hirsuta, or cow-itch. Submitted to the examination of the . . . president, the governors, and medical professors of King's College in New York, for the degree of doctor in physic . . . New York, S. Inslee & A. Car, 1771.
An early American medical thesis, the second from the newly organized medical school of King's College, predecessor of the present College of Physicians and Surgeons.

66.) Jones, John. 1729-1791. Plain concise practical remarks on the treatment of wounds and fractures . . . New York, John Holt, 1775.
The first American book on surgery.

The Development of American Medical Periodicals

Medical journals in this country had their beginnings in the transactions of medical societies, as well as in periodical publications of learned societies. Two of the latter may be seen among the volumes below demonstrating book illustration.

67.) Cases and observations; by the Medical Society of New-Haven County . . . instituted in the year 1784. New Haven, J. Meigs, 1788.

68.) Medical papers communicated to the Massachusetts Medical Society . . . Boston, Thomas & Andrews, 1790, no. 1.

69.) The medical repository, New York, T. & J. Swords, 1797, vol. 1, no. 1.
The first American medical journal. American reprints of foreign medical journals preceded this.

Medical Illustration in the United States

The early medical illustrations appeared in American reprints of foreign publications and were crude copies of the original plates. Examples of these are followed by original American illustrations.

70.) Bell, Benjamin. 1749-1806. A system of surgery . . . The first American edition, corrected. Worcester, Isaiah Thomas, 1791, vol. 1, opened at pl. 3, p. 30.

71.) Hunter, John. 1728-1793. A treatise on the venereal disease . . . Philadelphia, Parry Hall, 1791, opened at pl. 6.

72.) Smellie, William. 1697-1763. A set of anatomical tables . . . and an abridgment of the practice of midwifery . . . first Worcester edition . . . Worcester, Isaiah Thomas, 1793, opened at pl. 10, p. 23.

73.) Cheselden, William. 1688-1752. The anatomy of the human body . . . First American edition. Boston, Manning & Loring, 1795, opened at pl. 12, p. 123.

74.) Transactions of the American Philosophical Society, held at Philadelphia . . . Philadelphia, Thomas Dobson, 1799, vol. 4, opened at pl. 1, p. 530.
This plate accompanying an article by Dr. Caspar Wistar, 1761-1818, is signed by the artist, Titian Peale, 1780-1798, son of Charles Willson Peale.

75.) Transactions of the Literary and Philosophical Society of New-York: instituted in the year MDCCCXIV. New York, 1815, vol. 1, opened at pl. 2, preceding p. [539].
The improvement in the art of engraving in this country may be seen in this plate, engraved by the artist and physician, "the American Bewick," Alexander Anderson, 1775-1870, to accompany an article by the New York physician, John Wakefield Francis, 1789-1861. Two of the three figures in this illustration are signed, "Jarvis," doubtless the painter, John Wesley Jarvis, 1781-1839.

An Early Hospital Report

76.) Society of the New York Hospital. Charity extended to all. State of the New-York hospital for the year 1797. [New York, 1798], no. 1.
Although incorporated in 1771, this hospital was not opened until 1791. The statistics for the year, 31 January, 1797, to 31 January, 1798, show that 472 patients were admitted.

A Comparison of the Old and the New in the Printing of Woodcuts

77.) Vesalius, Andreas. 1514-1564. De humani corporis fabrica librorum epitome. Basel, Joannes Oporinus, 1543, opened at fo. I^{r}.
The original edition of the *Epitome*.

78.) Vesalius, Andreas. 1514-1564. Icones anatomicae, New York & Munich, 1934 [1935], opened at plates following p. 120.
This publication of woodcuts printed from the original blocks made for the 1543 editions of the *Fabrica* and the *Epitome,* was sponsored by the New York Academy of Medicine and the University of Munich.

ASSOCIATION NOTES

THE MEETING PLACE OF THE 42ND ANNUAL SESSION OF THE MEDICAL LIBRARY ASSOCIATION, JUNE 25-27, 1940

THE University of Oregon Medical School, where the 42nd annual meeting of the Medical Library Association is to be held on June 25, 26, 27, 1940, was established in 1887 and has been the only medical school in the Pacific Northwest since Willamette University Medical School merged with it in 1913. It is located in Portland, a city of over 300,000 population on the Willamette River near its junction with the Columbia. The campus is on an 108 acre scenic tract of hills and valleys, with broad lawns and wooded sections covered with evergreen, dogwood, oak, and other shrubs and trees, occupying a site at an elevation overlooking the city and the Willamette River. On it are the buildings of the medical center, the medical school laboratory building, the library attached to this by a corridor, Doernbecher Memorial Hospital for Children, an outpatient clinic, Multnomah County Hospital and across a ravine spanned by a footbridge level with the tree tops, the new University State Tuberculosis Hospital, and beyond this the buildings of the 300 bed Veterans' Administration Hospital.

The library building, which was occupied in October 1939, was made possible by the generosity of Dr. John E. Weeks whose gift of $100,000 brought a similar gift from the Rockefeller Foundation and funds from the P.W.A. From its tall east windows can be seen the Cascade range with the snow-capped peak of Mt. Hood and from the periodical room on the north side of the building Mt. St. Helens, Mt. Rainier, and Mt. Adams can be viewed above the treetops in the foreground. The library, which is the only organized medical library in Oregon, serves the school and is the official medical library for the Multnomah County Medical Society, the Portland Academy of Medicine and the physicians of the state.

The Program and Entertainment Committee of the Medical Library Association for 1939-40 hopes you will visit the library in June at the time the annual meeting is held, but the library staff will be glad to welcome you at any time.

MISCELLANEOUS NOTES

THE *18th Annual Report of the Library of the London School of Hygiene and Tropical Medicine,* 1938-39, explains the plan of co-ordination of the London medical libraries, which was put under operation after a survey was made under a grant from the Rockefeller Foundation. The direct result of this survey has been the compilation of a union list of all periodicals taken by the London libraries. Following the compilation of this list, librarians of the various libraries met and plans were made for cancellation of unnecessary duplicates of subscriptions. Essential elements in the scheme are interlibrary loans and the rapid exchange of information about periodicals and costly works so as to avoid overlapping. The four large London libraries agree, so far as possible, to specialize in their own departments of medicine. It is interesting to note that this library was affected by the crisis of September 1938, as well as the following declaration of war in 1939. Long sets of the most valuable periodicals before 1930 were removed to the basement and others were arranged so that they could be easily removed in case of emergency. Duplicate sets and some very long sets were moved to a country house in Kent. The librarian reports exchange service through the Medical Library Association with sixteen different American libraries.

The University of Columbia Library opened a lending service in January of this year which is designed to supply current books, both fiction and non-fiction, for the use of members of the university and their families. This new department will be supported by fees comparable to those charged by commercial lending libraries and will supplement the existing services of the library by supplying popular books which it has not been able to purchase at all or only in a very limited number of copies. Fees are four cents a day, if paid in cash, but a card good for thirty-four days may be bought for $1.00.

The second number of the *Bulletin of the Argramonte Memorial Library* was published on January 5, 1940, and notes that for the second consecutive year formal instruction in the use of the medical library was given to the freshman class. Instruction was given over a period of six weeks and included both lectures and projects. Thirteen different bibliographies on various medical subjects have been compiled for members of the faculty and this brings up the point as to whether an interchange of such bibliographies might not be arranged between different libraries with the idea of supplying the bibliographies either on an exchange basis or for a fee.

Central College, Fayette, Missouri, has established through the Friends of the Hooker Scientific Library, a bibliographic service in pharmacology. Dr.

Julian F. Smith has been added to the faculty as associate director to carry on this work.

Dr. Max E. Soifer, Librarian of the Hartford Dental Society, published in the December 1939 *Dental Items of Interest* his paper on, "Dr. Horace Wells, the Discoverer of Anesthesia."

The librarian of the Tohoku Imperial University Medical Library has sent to the *Bulletin* the ninth issue of the *Statistical Report of the Medical College Libraries of Japan,* for the year 1938-39. This report follows the statistical schedule of previous reports and undoubtedly is very interesting and could furnish much information, if we could read the Japanese captions.

The Special Libraries Association, Biological Sciences Group, in the *Grouplighter,* for December 1939, announces that the group is sponsoring a project for a compilation of special collections and services of Biological Sciences libraries.

Mrs. Roger W. Babson, Babson Park, Massachusetts, has had brought to the United States an original room from the famous home of Sir Isaac Newton in London, where he lived from 1710 to 1725. Housed within this room is a remarkable collection of books by Newton, books from Newton's library, manuscripts and Newton memorabilia.

Miss Lucy Eugenia Osborne has recently issued her *Report* as Custodian of the Chapin Library at Williams College for 1938-39. This most interesting item covers the activities of the library during the current year and the following quotation from the final part of the report should be read by every librarian who has anything to do with rare books:

"Not a little thought is being given at the present time to the subject of rare books in educational institutions. While they may be looked upon from two standpoints, the cultural and the strictly utilitarian, there should be no doubt as to their forming an asset; indeed, the mere possession of rare books in fine condition and of illustratious provenance contributes to the distinction of the institution to which they belong.

"Rare material may be ignored and its importance and potentialities underrated, but the books themselves continue to stand in dignified beauty, always ready for the discerning, always pointing to the accumulated wisdom and technical achievement of the past, while at the same time they offer enormous rewards to those of today who rightly and intelligently appraise them. Attention to the problems of the moment need not deflect one from a constructive interest in the past; indeed, one may profit from a backward glance, for he may thus see how often the world has witnessed a return to order and civilization after years of confusion and barbarism.

"Rare books offer concrete proof of an impulse toward a wider diffusion of learning. When the Renaissance urged men onward to devise a swifter and more flexible medium for the dissemination of knowledge, the invention of printing with movable metal types was an answer to this need, and in the productions of the first presses we see the beginnings of the modern book. In those early years men learned to fulfil technical requirements while at the same time they followed manuscript tradition in making books beautiful. Early books are more, however, than historical monuments to be kept as in a museum. They contribute (and this is peculiarly true in a small college) a

cultural atmosphere which is not to be despised in present world conditions. Undergraduates should, it is true, learn to comprehend the harshness and the difficulties of life in general which they will later encounter; but there is no reason why on the campus they may not absorb some other ideas as to amenities, which will sometime stand them in good stead. In this connection, fine buildings, fine pictures and fine books all play a part.

"The college man is privileged. He has an opportunity to lay hold upon certain things of unchanging importance which are for a time within his grasp; he may build up taste and understanding, and form an equipment of a broad and fundamental nature. Learning about fine books and seeing them at close range play a great part in this cultural phase of education."

The American Library Association has arranged for a Joint Committee on Foreign Importations to act on behalf of the association and also of the Medical Library Association, the Special Libraries Association, the Association of Research Libraries and the Association of College and Reference Libraries. This committee is prepared to keep in constant touch with the periodical situation and, if an emergency arises, members of the various associations will be notified of the decisions of the committee.

Mr. Frank K. Walter, University Librarian of the University of Minnesota, recently announced the fourth year of the course on Hospital Librarianship. At present, this is the only course in hospital librarianship leading to a degree in an accredited library school. Registration has closed for this year, but those interested in joining the course for next year or thereafter should inquire directly to Mr. Frank K. Walter, University Library, University of Minnesota.

Dr. John F. Fulton of New Haven has been made a member of the Advisory Committee of the Friends of the Bodleian Library at Oxford.

In the *Scientific Monthly* for November 1939, Dr. Fulton had an interesting appreciation of Dr. Harvey Cushing with an unusual picture of the doctor at the bedside of a young child.

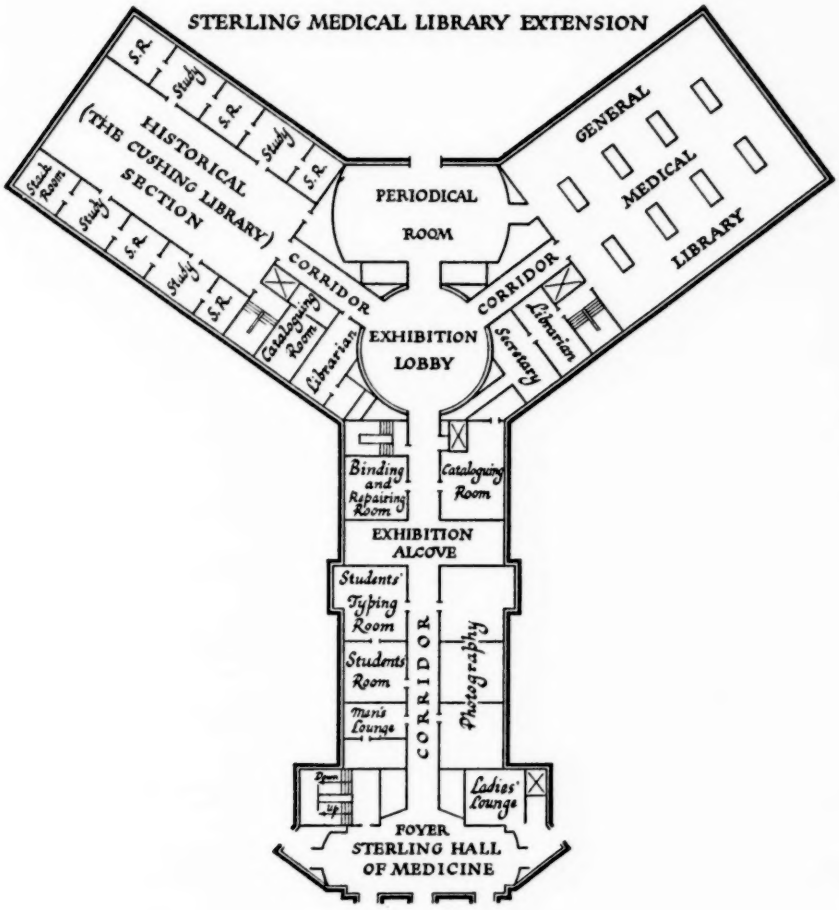
In the *Yale University Library Gazette,* for January 1940, there was printed a first-floor plan of the Sterling Medical Library extension which is to house the libraries of Dr. Cushing and friends. The cut is herewith reproduced by the courtesy of Mr. Knollenberg, University Librarian.

The *Hartford Times,* Monday, January 22, 1940, had an editorial on the Horace Wells Anniversary which has been reprinted in a small edition.

Mr. Thomas E. Keys, Reference Librarian of the Mayo Clinic Library, had an article in *Minnesota Medicine,* September 1939, entitled, "The Medical Library—A Laboratory for the Literary Physician."

An interesting letter has been received from one of our medical library correspondents in England. We have his permission to quote as follows: "The present situation is depressing for librarians here in London. No doubt matters will improve as the existing disorganization is remedied, but this is sufficiently great to show that its effects were not fully anticipated. One factor was the almost overnight evacuation from London of the work of practically all the colleges and of many institutions. The menace of the bomber had caused these to plan the transfer to the provinces to begin immediately upon the outbreak of war, certain measures being taken even earlier. But, although

the Library Association had given some thought to the problem of the libraries and staffs concerned, some of these have been closed and their staffs dismissed, some have suspended their staffs, and the remainder are functioning with reduced staff. We have felt all too keenly the lack of a medical library association, for it might have been possible to ensure that the importance of the



FIRST FLOOR PLAN

medical libraries was properly realized, instead of being left to individual concern; the Library Association did indeed communicate last May with the Government on the question of transferring library staffs of research and similar institutions to new or expanded research departments of the Government. This seems to have been ignored. . . .

"The problems to be faced both during and after the war will be many, and I am hoping that the upheaval has made other medical librarians more enthusiastic over an association. There are many difficulties, however, and much may depend on whether air attacks are made on London, and if so, on

the extent to which they affect public morale. Further, younger men will be conscripted, and as time goes on all the futility of war will be brought home to us more and more."

The Committee on Scientific Aids to Learning, President Conant of Harvard, chairman, has made a grant to cover the cost of making a microfilm master negative, on the most expensive film, of sets of volumes of scientific and learned journals. This permits the non-profit Bibliofilm Service to supply microfilm copies at the sole positive copy cost, namely 1 cent per page for odd volumes, or a special rate of ½ cent per page for any properly copyable 10 or more consecutive volumes. The number of pages will be estimated on request to: Bibliofilm Service, care U. S. Department of Agriculture Library, Washington, D.C.

The Special Libraries Association will hold its annual convention at the Claypool Hotel, Indianapolis, Indiana, Monday through Thursday, June 3-6. The theme chosen for the program is the "Utilization of Resources." Miss Alma C. Mitchell, Librarian of the Public Service Corporation of New Jersey, is president of the organization and all special librarians of Indiana are cooperating in making plans for the event. There will be a preconference trip to southern Indiana parks planned for librarians who expect to attend the American Library Association conference in Cincinnati the previous week as well as Special Libraries Association in Indianapolis.

Thomas E. Keys published an article on, "Fundamental Concepts of Medical Bibliography," in the January 1940 number of *Minnesota Medicine,* pp. 23-40.

Attracted by the prolonged autumnal heat in October, some unexpected visitors paid a visit to the basement of the Library of Washington University School of Medicine. Mama and Papa Black Widow Spider, with many baby Black Widows, afforded all naturalists a good opportunity to study them closely before they were routed by ether and additional applications of hot water.

Arrow Rock Tavern is one of the most interesting of the historic spots in Missouri, and two medical librarians from St. Louis who visited it, found many things of medical interest displayed in the Tap Room. There were the portraits of Dr. John Sappington and his wife, by Bingham, the doctor's saddle bags, his pill roller, and a vial of his famous pills for malaria. There also was a copy of his one and only book on *Fevers.* This little sheep-covered, 16mo. volume, written when he was 68 years old, was the first medical book printed in Missouri, Arrow Rock, 1844. In fact, it was the first medical book printed west of the Mississippi.

Mr. John Richmond Russell, formerly head of the cataloging division of the National Archives at Washington, D.C., has been appointed Librarian of the University of Rochester to succeed the late Donald B. Gilchrist. Mr. Russell will have charge of the collections of the College of Arts and Science, the Eastman School of Music, and the School of Medicine.

A National Book Fair was held at Rochester, New York, November 30, December 1 and 2, 1939, under the auspices of the Women's Auxiliary of the Rochester Academy of Medicine. Our well-known member, Mrs. Florence E. Cooksley, planned and organized the Fair and acted as Director. All pub-

lished accounts indicate a very successful undertaking which netted one thousand dollars for the Academy. All libraries in Rochester co-operated and lent many rare and old books making this department of the Fair outstanding. The Rochester papers had feature stories and the *Democrat and Chronicle* for Sunday, November 19, 1939, printed a fine picture of Mrs. Cooksley, who should be congratulated on conducting successfully a major undertaking. In addition to the funds acquired, the favorable publicity must have been of tremendous value to the Academy.

The attention of collectors of postal stamps of medical interest is called to the following special articles: Tha. Gallas, Medische philatelie, *Nederlandsche Tijdschrift voor Geneeskunde,* **83**:3921-3923, August 5, 1939. There is one plate, with reprodutions of twenty-five different stamps. Also: W.R.B., "A Handful of Good Life: Physicians, Propaganda and Philately." *Clinical Excerpts,* N.Y., **14**:3-14, 1940. The article reproduces thirty-three stamps.

ABSTRACTS

How Does This Sound? I. Banking on the Catalog. By Oscar C. Orman. Wilson *Bulletin.* **13**:388-389 (February 1939)

By way of speeding service at the circulation desk, it is suggested that a Permanent Call Card be substituted in place of the charging card. This card is the same size as the catalog card and is filed directly following the main entry card. Permanent Call Cards are made for all books in the library excepting for reference works or any other non-circulating material. At the bottom of the card is an open groove so that the card can be readily removed. Use of this card is not recommended for the dictionary catalog, but rather for the author catalog. If a user does not find a "P.C.C." card behind the author card, it means that the book is charged out, but if the "P.C.C." card is there, it means that the book is available. The P.C.C. card is then removed from the catalog and presented at the loan desk in lieu of a call slip. When the book is delivered the reader presents his "charge plate." The plate together with the P.C.C. card is then inserted in the electrical charging machine. To complete the charging process the colored "stack book card" is removed from the book pocket and the white "date due card" substituted. The P.C.C. is then clipped with a colored tab to indicate the date due and is then filed in the charge trays according to call number. Thus the P.C.C. card is three in one; call slip, book card and date due indicator. When the book is returned the P.C.C. is refiled in the catalog and indicates that the book is again available.

How Does This Sound? II. A Declaration of Independence. By Oscar C. Orman, Wilson *Bulletin,* 13:474-475 (March 1939)

Interests of libraries and librarians will be promoted more effectively if the many now existing special library associations become integrated into one single, strong, consolidated association. Advantages of such reorganization are enumerated. It is suggested that national associations appoint representatives to attend a constitutional convention which will consider these problems and make recommendations.

How Does This Sound? III. Some Thoughts Concerning Education. Wilson *Bulletin,* 13:532-533 (April 1939)

Instead of beginning professional library courses on the completion of four years of college work, the question is raised if incorporation of such courses with other undergraduate studies might not yield better results. A four year curriculum for such training is outlined. The first two years would include broad cultural courses with only one course relating to library service. The third and fourth years would include the standard library courses. By spreading these courses over two years the student would not be rushed through his training, but would have a better opportunity to assimilate the material presented. It would be possible to include more courses in the curriculum. Such a program would likewise bring younger librarians into the profession.

How Does This Sound? IV. Library Test Pilots. By Oscar C. Orman. Wilson *Bulletin,* 13:598-599 (May 1939)

To mechanize library service and increase efficiency it is necessary to have an experimental library where new methods may be tested. Such a library would have to be subsidized by some foundation interested in improvement and extension of library service. Preferably the experimental library should be located near a graduate library school so theory and practice might be closely associated. Application of the research method to library procedures would revitalize both the library and the librarian.

BOOK NOTES

A Bibliography of the Works of Ambroise Paré. Addenda and errata. By Janet Doe. 8 p. 1940.

When things are going so and so,
I often think of Janet Doe
And wish that she were round about
To help me on my troubled route.

When *Paré* from the printer came,
Without a flaw or misspelled name,
I thought at last, here is a task,
Perfection reached, as was expected.

And now she lists a long *addenda,*
As useful as a sound suspender
That evens out the load one carries
And enables us to add some *Parés.*

It's nice to know that Waller sought
And finally from a Comtesse bought
The Paris *Peste* of one-five-eight-o,
Thought of as unique in the S.G.O.

To Cushing he sold, as seems fair enough,
Old friends pass on that sought of stuff
To what they call, it's "natural home,"
And New Haven was surely the place for the tome.

Another soon came to the home in Lidköping,
Not very surprising, and no cause for quirking,
For everything goes to the banks of the Lid,
Except a rare item that's here overbid.

Of *errata* a few were bound to creep in,
An 'a' for an 'e'; a 'one' for a 'ten.'
Make changes at once, so your reader may know
That your *Paré*'s complete, by the marvellous Doe.

Bibliography of Swimming. By Frances A. Greenwood. 308 pp. New York: H. W. Wilson Company, 1939. $4.25.

There are 10,000 titles divided into 608 subjects dating from 1538 to the present time. As far as it is known, this is the most extensive survey of the literature on swimming which has ever been attempted.

New York City Department of Health. Periodicals Published 1866-1939. By Estelle Brodman. Issued in *Special Libraries* for January and February 1940.

A complete bibliography of the department.

La Psychiatrie dans L'Amérique du Sud. By Honorio Delgado et J. O. Trelles. 49 pp. Paris: Masson et C^{ie}, Editeurs.

This reprint from *Annales Médico-Psychologiques,* April 1939, contains an immense amount of material on South American neurological and mental institutions and is recommended to the reference librarian.

Scientific Societies and Institutions in Latin America. By the Pan American Sanitary Bureau. 50 mimeographed pages. Washington, D.C., January 1940.

This list is arranged by subjects and should be in all reference collections.

A Suggested Program for Augmenting Materials for Research in American Libraries. By Douglas C. McMurtrie, Chairman of the Special Committee on Library Holdings of the American Historical Association. 23 pp. December 1939.

An outline of a definite plan for surveying of materials existing in American libraries to be followed by compilation of subject bibliographies and abstracts of current materials. The Army Medical Library is cited as an example of a highly specialized library in a special field of knowledge, but unfortunately the writer credits it with the publication of the *Index Medicus* at the present time when this publication has been for many years issued by the American Medical Association in Chicago. There is considerable discussion prevalent in library circles concerning so-called *ephemera* and it is interesting to note that this report wisely states that, "There is no *ephemera* to the specialist." This report should be read by all librarians interested in research and in reference.

Author Entry for Government Publications. By James B. Childs. 38 pp. Washington, D.C., 1939.

This is a technical guide for the proper entry for government publications

which are a problem to many libraries. Mr. Childs is a well known authority in the field of government documents and his pamphlet should prove useful as a working tool.

Printing in Greenland. By Nathan Van Patten. 40 pp. Stanford University, 1939.

This is an interesting, short monograph on printing based on the special collection in the Stanford University Library. Of interest to medical librarians is Greenland's first medical book printed by the students of the seminary at Godthaab in 1856. At present there are only three recorded copies of this small pamphlet, one in the Royal Library at Copenhagen, one in the Krabbe collection at Stanford and one recently acquired by the Boston Medical Library.

Some Facts Concerning the Invention of Printing. By Douglas C. McMurtrie. 42 pp. Chicago, 1939.

This short account of the invention of printing especially in its early days is very well illustrated and discusses the subject from the time of Gutenberg to about 1474.

Budgeting the Low Income. Report of the Budget Council of Boston. 3rd ed. 62 pp. Boston, 1939. 40 cents.

This timely pamphlet can do no harm to librarians, but on the other hand may be of help especially to persons in the lower salary brackets. Copies may be had directly from the Community Health Association, 137 Newbury Street, Boston, Mass.

Catalogue of Latin and Vernacular Alchemical Manuscripts in the United States and Canada. By William Jerome Wilson. 844 pp. octavo, Bruges, 1939. Forms volume six of *Osiris.*

Mr. Wilson began work in 1935 and finished on May 30, 1938. He has produced not merely a catalogue but an analysis and page by page description of seventy-nine manuscripts dating from the thirteenth to the nineteenth centuries in Latin and the vernacular languages. Oriental manuscripts have not been included although a number are known to exist in the United States. Three medical libraries, the Army Medical Library, with one, the Boston Medical Library with two and the Osler Medical Library with three, are owners of manuscripts, six in number. *The Alchemical Compendium,* 1464-1468, Bamberg, Germany, owned by the Boston Medical Library, and containing over 800 recipes, and 22 diagrams of apparatus, is one of the important manuscripts in the catalogue. One hundred and eight pages are given to the description of this work. According to Mr. Wilson the compilation is, in its own right, a work of erudition, with considerable recognition of the

problem of textual criticism. In 1582 there was published a work of Paracelsus entitled *Manuale Chemicum, id est Thesaurus Chemicorum, particularium experimentorium* which is in many respects a companion piece to the Boston Medical Library manuscript. Both are chiefly in Latin, but partly in German, of the same or closely related dialects; both have a tendency to group the recipes on a given subject together; each gives cross-references from one part of the collection to another; and some of the actual recipes are the same.

The *Summetta* of Christophorus Parisiensis, in Italian, owned by the Osler Medical Library, is an important manuscript dated 1478, containing ten pages of drawings of alchemical apparatus and including a "mineral vine" for the extraction of the human quintessence.

The catalogue proper is preceded by a scholarly, historical introduction on occidental alchemy, followed by a valuable table of alchemical symbols, a general index, and a long and very full index of titles and incipits.

Only one who has tried to read one of the manuscripts written in the individual handwriting of the period can realize the onerus, painstaking, scholarly task it is to decipher, and evaluate the contents and produce the clear and legible transcription contained in this catalogue. Mr. Wilson has produced a remarkably fine piece of work which should be in every medical reference collection and not consigned to the class of "few will read and none will buy."

Jewish Contributions to Medicine in America. By Solomon R. Kagan. Second ed. 790 pp. Boston: Boston Medical Publishing Company, 1939. $3.50.

The first edition published in 1934 consisted of a volume of 550 pages, giving a list of the Jewish doctors in America and the works which they had accomplished to that date. Dr. Kagan in the new edition has added nearly 250 pages as a supplement and increased the usefulness of the book enormously. In it will be found biographical notations with a list of publications of all the Jewish physicians in America, including those who are still living. The volume, therefore, is an indispensable tool as a reference book and should be in every medical library. There are a considerable number of portraits of Jewish physicians and at the end, a new index, which serves to make the book doubly useful.

Mexican Imprints, 1544-1600, in the Huntington Library. An exhibition prepared and described by Henry R. Wagner. 35 pp. ill. San Marino, The Library, 1939. 25 cents.

Preceding the description of the texts, there is a short sketch of the history of printing in Mexico. The medical items are as follows:

81. Alonzo López de los Hinojosos. *Summa y recopilacion de Chirurgia . . .* 1578. This is the first edition of the first book on surgery printed in Mexico, as far as known.

82. Augustín Farfán. *Tractado breve de anothomia y cirurgia, . . .* Mexico, 1579.

101. Juan de Cárdenas. *Primera parte de los problemas, y secretos marauillos*

de los Indias. Mexico, 1591. The author discusses drinks, tobacco and other native products, and some of the diseases of the natives.

102. Augustín Farfán. *Tractado brebe de medicina y de todas las enfermedades, . . .* Mexico, 1592. The text is entirely different from the author's *Anothomia* (No. 82).

See also the article by Willard O. Waters, in the *Library Journal,* **65:** 50-53, January 15, 1940.

The Revolution and Organization of the University Clinic. By Simon Flexner. 41 pp. Oxford: The Clarendon Press, 1939. $1.35.

The book contains the two lectures, by the Eastman Visiting Professor, given at the Nuffield Institute, Oxford, in January 1938. Dr. Flexner traces the history of the teaching laboratory from the first established by Liebig in 1825, through the development of the university laboratory idea by Purkinje, 1842, von Ziemssen, 1884, to the period of Virchow, Müller and Schönlein, who were followed by Frerichs, Traube and many others.

The first American laboratory was that of Bowditch, a pupil of Ludwig, at the Harvard Medical School in 1871, and five years later, Johns Hopkins University established a laboratory in biology, including physiology, for Newell Martin. The first hospital, actually built wholly for research in clinical medicine, was that established by the Rockefeller Institute in 1910. This pamphlet should be in all medical libraries.

Hospital for the Ruptured and Crippled. An historical sketch written on the occasion of the seventy-fifth anniversary of the Hospital. By Fenwick Beekman. 157 pp. ill. New York: The Hospital, 1939. $3.00.

The history of the hospital is traced from its founding in 1863, while the civil war was raging, through the various epochs until 1938. It was the first hospital of its kind in the country and began operations in the home of Dr. James Knight on Second Avenue, with a small group of patients. The capacity was twenty-eight beds and the first year 828 patients were treated; fifty in-door and 778 out-door. In 1870, the Hospital moved to a new building erected on the corner of Forty-second Street and Lexington Avenue, the present site of the Hotel Commodore. It was here that Dr. Virgil P. Gibney carried on his pioneer work in orthopedics. In 1912, the Hospital again moved to its present six story building, on Forty-second Street, between First and Second Avenues. In 1925 Dr. William B. Coley followed Dr. Gibney as Surgeon-in-Chief. The present Chief is Dr. Philip D. Wilson, formerly of the Massachusetts General Hospital, who became the first full-time Director in 1934. Dr. Wilson, from his close contacts with the Treadwell Library at the Massachusetts General Hospital and the Boston Medical Library, was aware of the value of a medical library to an institution such as he was to direct and one of his first acts was to establish a medical library in 1935. The book is well writen and well produced and deserving of a place in all medical history collections.

Berzelius-Porträtt. By Arne Holmberg. 52 pp. 32 pl. Stockholm, 1939.

This volume of portraits of the Swedish chemist, J. J. Berzelius, 1779-1848, is published under the auspices of the Royal Academy of Sciences of Sweden. There are thirty-five figures in the text in addition to the thirty-two full page plates on special paper.

El pensamiento magico en las pinturas del antiguo Peru. By Carlos Gutierrez-Noriega. In: *Revista de neuro-psyquiatria,* Lima, **2**:426-462, 1939. Illustrated with twenty-two figures in the text.

An interesting study of the primitive symbolical paintings of Peru in relation to magic, totem and taboo.

The Story of Surgery. By Harvey Graham. 425 pp. New York: Doubleday, Doran and Co., 1939. $3.75.

A narrative of surgery, written by a prominent British physician, under the pseudonym of Harvey Graham. It is preponderantly British in its viewpoint with barely any mention of American surgery. A short chapter entitled "Death of Pain," stressing James Y. Simpson and chloroform, incidentally mentions Morton and the demonstration of ether anesthesia at the Massachusetts General Hospital in 1846 and reproduces the Robert W. Hinckley painting, without a note as to where it is to be found. The painting is in the Boston Medical Library. The first part of the book is given up to a discussion of primitive and ancient surgery, followed by European and British. The book is very readable, having a pleasing narrative style, reminiscent of James G. Mumford and his *Narrative of Medicine in America.*

The History of Dentistry in Missouri. Compiled and published under the direction of the History Committee of the Missouri State Dental Association. 600 pp. Fulton, Missouri; Ovid Bell Press, 1938.

The Committee expresses its appreciation to its Chairman, Edward Everett Haverstick, "for his untiring labors and sincere devotion in the preparation of this book." The work begins with a short sketch of dental history in general, followed by a chapter on early Missouri dentists. This is followed by the history of the State Society and its eight component districts. There are chapters on Dental Education and Dental Schools; on dental instruments invented by Missourians and on the Dental Laws and Dental Boards of the State. The appendices contain some very valuable reference material; a list of all National and State dental societies; one of Missouri dental publications; a list of presidents of the national dental societies; and finally eighty-three pages are given up to a list of all known Missouri dentists. There is much biographical material throughout the book which is made available by a thirty-three page personal name index.

The *Bulletin* will note from time to time books of interest primarily on account of extensive bibliographies. The two following titles fall into this category.

Vitamin D. Chemistry, physiology, pharmacology, pathology, experimental and clinical investigations. By C. I. Reed, H. C. Struck, and J. E. Steck. 389 pp. Chicago: Univ. of Chicago Press, 1939. $4.50. A valuable source book with a sixty-nine page bibliography.

Virus and Virus Diseases. By Thomas M. Rivers. The Lane Medical Lectures. 133 pp. Stanford University, Calif.: Stanford University Press, 1939. $2.50.

Each of the five chapters has an extensive bibliography.

RECENT CATALOGS

"One of the uncovenanted mercies of the grim struggle in which we are now engaged, is the many messages of goodwill we are receiving by every mail from customers across the Atlantic. These letters have given us great encouragement, and we wish that we had the time to reply to all our correspondents individually, and in a manner as generous and unreserved as their own. Unfortunately this cannot be; for the calls of National Service have sadly depleted our staff and, if the war is of long duration, our personnel will continue to diminish.

"We adopt this means, therefore,—before the shortage of paper and staff become too acute—to thank you all for your cheering messages, and to assure you of our resolve to 'abide by the stuff' until we are bombed, insured, or taxed out of existence. It is our intention to issue catalogues of libraries purchased, or of selected portions of our own stock, as often as conditions will allow; and supported by the zeal of our attenuated staff to carry on as efficiently as we can. Your orders will be doubly welcome: not only as bringing grist to our own mill, but indirectly helping to provide the necessary sinews of war." *From an English book-dealer.*

*Argosy Book Stores, 114 East 59th St., New York, N.Y.

Medical rarities. Catalog 125. 200 items.

Rare and Important Medical Books. Catalog 155. 884 items. Arranged by subject, with author index.

L'Art Ancien, 24 Gartenstrasse, Zurich, Switzerland.

Old medicine and science. Natural history. List 10, part 2. 125 items.

* Member, subcriber or advertiser.

HENRY GEORGE FIEDLER, 31 East 10th St., New York, N.Y.
Sets of periodicals on medicine. List 47. Four pages.

FRANK GLENN, 22 Baltimore Ave., Kansas City, Mo.
Natural history, science and technology. List 12. 105 pages.

*E. P. GOLDSCHMIDT & CO., Ltd., 45 Old Bond St., London, W. 1, England.
Catalog 53. 300 items. Number one is the 1628 Harvey "De motu cordis" at £425 ($1700). The lowest price in recent years. Small collection of old medical, chemical and astronomical instruments. *25 items,* some dental.

GOODSPEED'S BOOK SHOP, 18 Beacon St., Boston, Mass.
The Month, May 1939, pp. 281-285. "Morton's Letheon." A short historical sketch of the ether controversy, and listing fourteen ether items.

GRAFTON & CO., 51 Great Russell St., London, W.C., 1, England.
Medicine. English books and pamphlets to 1800. Catalog 218. 157 items.

*HOOSIER BOOKSHOP, 2135 North Alabama, Indianapolis, Ind.
Americana Medica, List 75. 174 items.

A. J. HUSTON, 92 Exchange St., Portland, Me.
Old medical books. November 1939. 20 pages.

CHEZ DURTAL (Pierre Lambert), 12 Rue Jacob, Paris, France.
L'histoire des sciences. Catalog 27. 537 items. Part three, medicine.

R. LIER & CO., 33 Via S. Félice a Ema, Florence, Italy.
Old Medicine and Science. February 1940. 119 items.

DAVID LOW, 17 Cecil Court, London, W.C. 2, England.
Medicine. Catalog 28. 596 items.

*MARTINUS NIJHOFF, 9 Lange Voorhout, The Hague, Holland.
Medicine. List 267. 115 items, many of historical interest.

MUSEUM BOOK STORE, Ltd., 45 Museum St., London, W.C. 1, England.
Scientific and technical journals and transactions of learned societies. Catalog 123. 750 items.

C. A. STONEHILL, Ltd., 84 The Promenade, Cheltenham, England.
The Jewish contribution to civilization. A catalog of 198 pages listing 2585 items. Arranged by authors and including a number of physicians. The cataloguer has confused Abrāhām ben-Ezrā 1089?-1167, the author of *De nativitatibus,* with Abrāhām bar Hyya Hanasi, who died about 1136. Both were called Abraham Judaeus which leads to a natural confusion. ben-Ezrā wrote in Hebrew. A French translation of his *De nativitatibus* was made by a Jew named Hagin who lived in Henry Bate's house in Malines in 1273. The Latin translation was by Henry Bate. This catalog with its biographical notes forms a source book of value. Copies may be had for $3 from C. A. Stonehill, Jr., 262 York St., New Haven, Conn.